

**Understanding of Coronary Heart Disease in South Asian
Migrant Men in the UK**

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**Thesis Submitted In Partial Fulfillment of the
Requirements of the Award of
DOCTOR OF PHILOSOPHY**

DE MONTFORT UNIVERSITY

JANUARY 2010

VOL-1

ABSTRACT

This research explored the understanding of coronary heart disease among the South Asian Migrant men in the UK. The objectives of this study are:

- To explore migrant South Asian men's understanding of the risks involved with coronary heart disease in the UK
- To relate their understanding in the context of current health care policy
- To suggest ways to provide culturally sensitive health promotion programs to these groups

A phenomenological perspective using qualitative research methodology and focus group interviews were used to obtain a more precise and in-depth understanding of the risks involved with coronary heart disease. In total 83 men were recruited. 13 focus groups were conducted in three different areas across the country which had a significant South Asian population. Three themes emerged from the analysis of the interviews: Psychosocial factor, conventional risk factors & health care experiences. These themes reflected the men's understanding of the risks Involved with coronary heart disease In the UK.

According to Williams *et al*, (2007 & 2009), information about psychosocial risk profiles in UK South Asians is limited and that there is an increased

possibility that psychosocial related factors contribute to increased vulnerability to coronary heart disease in South Asian in the UK. This study concludes with the importance of recognizing that not all South Asians are the same and that health professionals should look beyond the context of religious, and ethnic background and focus on individual men.

DEDICATIONS

My parents, Arakanattill Gheeverghese George and Annamma George
(*Chinna Kannaï*)

ACKNOWLEDGEMENTS

According to the Malayali Orthodox Christian way of life, we always begin any event with prayer and thanksgiving, so keeping with tradition I would like to acknowledge my gratitude to God, who guided me through a maze of uncertainties during the last six years. Reflecting on my journey, I personally feel it had the making of a Bollywood blockbuster movie which comprised of drama, passion, marriage, love and sickness. A lived experience, which happens just once in a life -time

Supervisory Team: I would like to thank my first supervisor Professor M.R.D Johnson, for his continued guidance, support, constructive comments and motivation. My second supervisor, Professor Aly Rashid, for his assistance and encouragement to make my own voice heard in this research. I would have never been able to complete this study without the motivation and

support from both my supervisor's who constantly encouraged me during my difficult times in 2007 and 2008. Thank you.

Mary Seacole Research Centre staff: especially Sirron who will be missed

Friends: Dhiman Bhai, for his tremendous help during recruitment in Leicester, Arshad Bhai in Leeds and Aftar who is more like an elder sister to me., Tony & Pope *Anna* for the help in East Ham, Everyone at *Hamara Health Centre*, Leeds

Family: My sister, Gini & *brother -in- law* Mathew in Melbourne who kept reminding me that there is always light at the end of the tunnel and BB (Inna Sorokolina) , you were there when I needed you most.

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CHAPTER ONE

INTRODUCTION

This thesis is the result of an investigation on the topic of coronary heart disease (CHD) in South Asians in the UK. Specifically, the study focuses on health beliefs and related health behaviours, knowledge of CHD risk factors and the experiences of migrant South Asians with CHD. The migrant population derives from the Indian Subcontinent and East Africa. In this chapter, I will introduce the reader to the study and specify research questions that this study will address. I will also discuss the study's significance, and finally provide an overview of the contents of each chapter in this thesis.

CHD is the leading cause of mortality and morbidity in many countries, and it is estimated that it will be the single largest cause of disease burden globally by the year 2020 (Lee *et al.*, 2001). Numerous studies have highlighted that South Asian migrants around the world

have a higher incidence of CHD than indigenous communities. South Asians have the highest incidence, prevalence, mortality and morbidity from CHD in comparison to any other population/ethnic group globally (Enas, 2000; Enas & Senthilkumar, 2001), irrespective of the country to which they migrate (Bhopal, 2000). Health professionals and cardiac researchers worldwide are confronted with the issue of the high incidence of CHD amongst South Asians.

In order to provide culturally competent and sensitive care for migrant South Asians with CHD, and to promote better health promotion and advice, it is vital to have a clear understanding of the impact of factors such as culture and migration, level of knowledge, health beliefs and behaviour on CHD. South Asians have different religious affiliations, cultural values and food habits which are based on the regions from which they migrated. Some still observe the caste system or use traditional medicine (Shaw, 2001). By exploring some of these issues, the study hopes to fill the gaps in the literature and provide new knowledge that could help create tailored CHD practice guidelines and health promotion programs that are sensitive to the South Asian culture.

I have conducted this research because I wanted to work with communities and find ways around their health issues. On a personal note, in 2001, my father suffered a massive heart attack and survived. He had to undergo a triple bypass surgery. Unfortunately, I could not go back to India because of the unavailability of flight tickets during the peak Christmas season; to this day, I feel guilty for not being there, not being able to help, in spite of being the only doctor in the family. As part of my MSc degree, I studied South Asians and CHD using a mixed methodology of qualitative and quantitative studies in the Beeston area of Leeds. There was still scope to research the subject further. The sample used for the MSc research was limited, because the participants were only from the Pakistani and Bangladeshi

communities. I enrolled at Mary Seacole Research Centre for a PhD program because I wanted to use my experience in helping the community.

I always wondered “As a person of South Asian origin, am I destined to die of CHD?”, or as Professor Marmot mentioned in his book (2002: 2): “What if we rounded up all the usual suspects (risk factors) and they all belonged to the same gang?”

For someone like my father, who never smoked, led a healthy lifestyle, was not diabetic, and walked quite lot, there were no obvious risk factors. I always questioned whether my father’s heart condition stemmed from genetic factors or stress.

BACKGROUND

I bring to this research not only my educational and professional background as a doctor and researcher, but also my personal experience as a person of South Asian origin, and my own assumptions of CHD from the perspective of a family member. In order to help the reader to understand the context I am coming from, I would like to begin this section by reflecting on my own understanding and assumptions about CHD, which have been influenced by numerous factors. As with many other people of South Asian origin who live in England, South Asian culture influences my lifestyle, beliefs and values even though I have spent nearly half of my life in Europe. Belief in God and respect for elders are two value systems that have been deeply embedded in me, like taking care of elder family members and also believing in the system of *dharma*, performing one's duties from childhood to old age.

Religious practices and traditions played a major role on my health and health behaviour. Fasting according to the Orthodox Christian way of life and celebrating other Indian religious festivities was a common practice throughout the year, including the consumption of excessive amounts of sweets and fried food cooked in ghee (clarified butter). Inadequate and infrequent consumption of vegetables and fruits was common. Milk was always full fat. My father used to justify this way by saying "Why give the milkman the fat, when he will charge you again for butter?"

Since migrating to the UK in 2001, I have made a lot of changes to my diet. I eat more salads and organic food because this lifestyle makes a statement in my circle of friends. There were times when healthy people in my family died, and that would change my whole attitude towards healthy lifestyle, and religion would be the main focus. This was contrary

to the reflexive attitude of fatalist relatives, who commonly opine “What is the point of all this, when all are going to die anyway? ... It is the will of God.”

Most middle class families in India employ domestic servants for household chores, and our family did the same, which to some extent I personally feel contributed to a sedentary lifestyle. Having regular health checks was never a common practice in my family, because being in “good” health was perceived as a result of being a “good” person, and visiting the doctor was the last option, occurring in situations where the health condition of a family member caused significant concern, or in an emergency. In spite of being aware of the risk and impact of CHD, I still believe that my exercise and eating habits need to be drastically improved.

According to Bhopal (1999 & 2003), all South Asians are not the same, and the majority of them are fairly knowledgeable about the risk factors for CHD. However, this knowledge is very superficial (which was clearly highlighted in Chapter Four during the pilot study). Most of the men knew about a number of risk factors associated with CHD, but are unaware of recommended amounts of sugar, fats and salts in their daily diets.

Health professionals need to tailor health information according to individual needs, as the South Asian Diaspora in the UK is different, based on caste/religion, culture and country of origin. I have also seen individuals becoming very health conscious and cutting down too abruptly on salts, sugar and fats, which could lead to other complications like enlargement of the heart or even heart failure.

AIMS OF THE STUDY

If tailored health promotion and prevention programs for CHD are to be delivered in a multicultural society such as the UK, it is important to understand the cultural sensitivities and needs of migrants. Given the high risk of CHD among the South Asians in the UK, it is important to obtain answers to the following research questions:

- What are the health beliefs, behaviours and risk factor knowledge of South Asians in the UK in relation to CHD?
- Does migration to the UK affect South Asians' knowledge, beliefs and behaviours in relation to CHD?

SIGNIFICANCE OF THE STUDY

Given the high morbidity and mortality rates due to CHD among the South Asians (Wild & McKeigue, 1997; Bhopal *et al.*, 2005), it is crucial to gain deeper understanding of knowledge, health behaviours and beliefs and experience of CHD among migrant South Asians. I hope that findings from this research study will provide new knowledge that will help devise strategies for CHD prevention and ongoing care among the migrant South Asian community. Findings from the study will enhance health professionals' knowledge and hopefully make a difference on the quality of care for this group. As discussed earlier, South Asians in the UK are different from those who migrated to the USA, Australia and New Zealand, based on their level of education.

I would also like to mention that; I would like to contest this use of Caucasian meaning White (along with Professor Mark Johnson, first supervisor). It is commonly used in the

papers I cite, and where this is so, I have used their terminology rather than correcting it every time

LAYOUT OF THE THESIS

The current chapter has introduced the reader to the study and provides an overview of the thesis, including the study background, aims and research questions and significance of the study. The second chapter of the thesis will discuss health beliefs and health behaviour models within the overall concept of South Asians and ethnicity. Chapter three discusses previously reported research in relation to the issue of CHD amongst South Asians in the UK. Chapter four analyses in detail the methods used in this study, the constructive paradigm and its application in the context. Methods of data collection and analysis, including ethical considerations, and strategies used to maintain rigour and quality of the research are discussed in relevant sections of the study. Chapter five presents the results of the study. Chapter six explains the joint constructions that emerged from the conversations with the participants. Chapter seven discusses study findings with reference to existing literature, and highlights new knowledge derived from the study. Chapter eight summarises the study and its present implications of its findings for health professionals, and discusses its strengths and limitations. Finally, recommendations for future research are provided.

CONCLUSION

This chapter has provided a brief introduction of the study and discussed the layout of the following thesis. This research will add to the existing body of knowledge on CHD in the migrant South Asian population as a combination of cultural, genetic and social factors has a significant impact on the incidence of CHD in this community. In the next chapter I will discuss South Asians and their concepts of health beliefs and health promotion and the lay understanding of CHD.

Chapter Two

South Asian Culture

INTRODUCTION

Chapter two provides an overview of the literature relating to the topic of South Asian (SA) men in the UK and the influence that culture and religion has on CHD in relation to health beliefs and health behavior. In this chapter I will be discussing various health models: the health beliefs model, self-efficacy theory, health action model, health locus of control model, and trans-theoretical model. Even though a number of these models have proven effective in changing the behavior of South Asian men in the context of CHD, their effectiveness has not been determined amongst first generation South Asians, nor new migrant groups.

LITERATURE SEARCH STRATEGY

A literature review is vital to all steps of the research process. According to Krainovich-Miller (2002), the review of literature is needed so that the clinician may develop a strong knowledge base, in order to carry out research and scholarly, educational and clinical activities. The literature suggests that South Asian groups are at extremely high risk of CHD compared to the population as a whole, and increasing evidence has highlighted that men in the poorest groups, of Bangladeshi and Pakistani origin, have the highest rates. The causes of this excessive risk are not understood completely, but recent work indicates that in addition to the classic risk factors including smoking, diet, high blood pressure, central obesity and insulin resistance, to name a few, socio-economic factors are also important (Bhopal *et al.*, 2002; Bhopal, 2000)

Despite the evidence of the burden of CHD among South Asian migrants in the UK, there is a paucity of qualitative research in understanding their health beliefs, which are influenced by

lifestyle and health behavior, which in turn is influenced by culture (Helman, 2007). A literature search was conducted in August 2003 and repeated at regular intervals, most recently December 2010, to understand South Asian men's' understanding of CHD. The search involved using key words: "coronary heart disease", "South Asians", "risk factors", "qualitative", "focus groups", "Phenomenology". "epidemiology", "culture", "lifestyle", "religion", "new/old migrants", "health attitudes" and "health behavior". Searches were limited to English-language articles only.

The databases that were searched included: Medline from 1990, (CINAHL) from 1990, and (AMED) from 1990, Zetoc email alert was also used from 2003 to identify new papers using the key words like "qualitative" and Focus Groups. Since I wanted the inclusion criteria to be broad as possible, any articles in English were included that were linked with South Asians and their understanding of CHD. About 250 papers were included at the time of writing. The literature regarding South Asians' understanding of CHD is predominantly, but not exclusively, qualitative, as the techniques used in qualitative studies are better suited to exploring the understanding of CHD than quantitative studies, which usually ask people to select from a range of pre-defined answers. In spite of a thorough search being made, it is possible that some relevant papers have been overlooked.

Before planning any intervention programs for the management and prevention of CHD for a given cultural group, it is important to understand the cultural sensitivities (Samanta *et al.*, 2009) and standards/norms which legitimize those social practices shared by a group of people. For example, according to Bradley and Gamsu (1994), to manage diabetes successfully, it is important to understand the attitudes and beliefs, social networks, families, attitudes and beliefs of the patients that are being treated

ETHNICITY & RACE

According to the 2001 Census, ethnic minority groups form approximately 7.9 per cent (4,694,681) of the total UK population (58,084,857). Asians or British Asians form nearly 50 per cent of the ethnic minority community in the UK, and 25 percent are black or black British; a further 15 per cent are of mixed race (ONS, 2003). Compared to earlier data, this shows that the ethnic minority population is growing quickly, and that nearly three quarters of the overall British population growth was due to a high birth rate and migration.

According to Long (2003), 85 per cent of human genetic variation exists within any given population. Between races there is genetic variation, but there is little within races. The concept of race (biologically) is used to explain why some groups have been affected more than the others by particular health problems. For example, South Asians are afflicted with more cases of CHD, while sickle cell disease occurs more often in people of African origin. Genetically, race is the group we belong to, and genetic studies have highlighted that there are biological differences between individuals from the same racial group. Humans have been mixing across racial lines for millennia, and biologists have shown that we all descend from common ancestors in Africa. Based on biological classification, I should be classified as “Caucasian”, but numerous studies in North America have used the term “Caucasian” according to the traditional cultural understanding, to describe people who are of European decent, with white skin colour. According to Bhopal (2007), the biological classification of all human beings is as follows: *Homo Afro* (Negroid), *Homo Europaeus* (Caucasian); *Homo Asiaticus* (Mongoloid) & *Homo Americans* (Native Americans). According to Bhopal (2007: 13):

Ethnicity is a multifaceted quality that refers to the group to which people belong, and/or are perceived to belong, as a result of certain shared characteristics, including geographical and ancestral origins, but with particular emphasis on cultural traditions and

languages.

Ethnicity and race are important to the structure and function of human populations. Ethnicity is not a static quality that individuals possess, but it is a relationship under continuous negotiation between interacting factors of culture, and is used to refer to people who share the same denominators of religion, heritage, geography and ancestry. According to Senior and Bhopal (1994), the four major issues when dealing with ethnicity in epidemiology are: *measurement difficulties, heterogeneity of population, ethnocentricity and ambiguity about the purpose of using these variables*. As a person of South Asian decent, “Caucasian” is the only classification which I fit in perfectly. My understanding of race and ethnicity is explained in the following paragraph:

I was born in Abu Dhabi, raised in India, educated in Russia, the USA and the UK, and I think I can enjoy the benefits of different cultures. Most people see me as Bangladeshi or Asian. Some get confused with the *Khadi* in my hand for a Punjabi. I am a member of the Christian religion, my first language is Malayalam. I rarely eat an Asian meal. The census classification does not fit my category. The only option is Indian or British Indian. If there is no other option, I will pick the ethnic group category India. Most people will assume that I am of Indian race, but I am forced to choose Caucasian, even though in my understanding, it is closely linked to the White/European cultural identity. My race is not Asian, and this makes it extremely difficult to fit into any category.

RACISM

The fundamental principle of racism is a belief that some races are superior to others. Various studies have identified a significant degree of racism in British society. Reynolds (1993) said that “We are the scientific community... bring everything we have been taught by our culture and upbringing - our racism our xenophobia, our sexism our homophobia, ”

There is growing evidence that racism can affect health in several ways (Williams *et al.*, 1994), including impacts on individuals' blood pressure, respiratory illness, psychosocial distress, depression, anxiety, stress and anger (Richman, 2007; Julius, 2009; Peters, 2006).

CULTURE & PRACTICES

Understanding the concept of culture is a key to understanding human behavior. The way in which we see, interact and experience the world around us is deeply influenced by our culture. People who identify themselves with an ethnic group are assumed to share the same culture. This stereotypical view is an over-generalization, as not all members of society share the same culture, but instead identify themselves with different social groups, which they feel they have strong cultural ties to. According to Black (2009), culture is not only associated with a specific ethnic group, but can also be associated with religious groups. For instance one might be able to identify the following ethnic and religious groupings: British (Indian, Pakistani, or Bangladeshi) or British Indian (Gujarati, Tamil), British (Sikh, Muslim, Hindu, Buddhist or Christian) or just Indian Punjabi or Indian Malyali.

Studies by Clegg (2003), Kreuter *et al.* (2003), and Holt *et al.* (2003) have argued that cultural beliefs have a strong role to play when tailoring programs which focus upon individual needs from very specific cultural groups. The role of the health care provider is to bridge the gap between the system and the patient, and this not only builds a rapport with patients belonging to a minority group, but also improves the overall health outcomes. For example, the South Asian Sri Lankan Muslim community is different from the Sri Lankan Tamil-speaking Christian community. In spite of both these groups being minorities in Sri Lanka, they come from diverse regions of the island and their lifestyles are different. However, the cost effectiveness of creating health care programs tailored to each group needs further evaluation (Lipsy, 2003; Kreuter & Skinner, 2000), because of the diversity within the

South Asian community in the UK. A belief in supernatural forces is regarded as normal within the South Asian community. Phenomena such as the occurrence of an illness due to cursing or the wishing of ill health upon another, including cases of the ‘evil eye’, were identified by Gujarati Indian migrants from the study. According to Shaw (2007), traditional medicine is practiced widely amongst South Asians, especially within the Pakistani community, where members seek advice and guidance from traditional healers (*hakim*). Some members of the Pakistani ethnic group still follow practices from their homeland such as child birth procedures, or using herbs and plants for healing.

MOVEMENT OF SOUTH ASIANS

Migration has been a fundamental human behavior since the evolution of humans as hunter gatherers, moving from place to place for food and resources, and also exploring new ways of life. The last four decades have seen different movements within the South Asian Diaspora. Initially, those who migrated came directly from the Subcontinent, from several distinctive regions which had a history of troubles (especially after the Partition of India), which made migrating the best option for many. Most of these migrants financed their travel themselves, or received help from extended families. As this was very expensive, many of the initial migrants were only males.

Modern day migration is different because people move for different reasons, including work-related ones (example the older and newer migrants in this study), political turmoil (East African South Asians during the reign of Idi Amin) and as refugees (Sri Lankan Tamils). The male South Asian pioneers across the globe experienced firsthand that the promise of migration was not always as simple and straightforward as they had imagined. For example, ‘twice migrants’ such as East African Asians (Bhachu, 1985) and ‘thrice migrants’ such as Malayalam and Tamil communities had the experience of living in new culture

totally different to their own, and were willing to adapt to new changes and even learn the host languages.

From the late nineteenth century, it was a policy of the British Government to employ diverse nationalities throughout the Empire. Chinese labourers were employed in the Transvaal, and rubber plantation workers in Malaya emigrated wholesale from India and Ceylon. This was alongside a more general elevation of the condition of Indian elites from the time of 1857 'Mutiny'; Indian civil servants (including lawyers) were employed in the colonial administration, and Indian merchants and educated elites were transferred to Africa to develop the economic potential of the colonies there. Following independence (granted to most colonies from 1945 onwards), resentful African nationalists such as Idi Amin or more overtly white supremacist regimes like that in apartheid South Africa pushed many South Asians in the former British colonies, alongside those in the Indian Subcontinent itself, to emigrate to Britain.

SOUTH ASIAN MIGRANTS IN THE UK

The South Asian population in the UK has risen drastically despite various stringent controls imposed by the British Government since the 1960s (e.g. the 1962 Commonwealth Immigrants Act). In 1961, the South Asian population in Britain stood at 106,300 (0.23 per cent of the total British population); by 2001, it was 2,083,759 (3.6 percent of the total British population). Of these South Asians, 1,030,348 are of Pakistani or Bangladeshi origin, compared to 1,053,411 of Indian origin. Chain migration was common in many cases, and this is a key reason why there is a peculiarly heavy representation of particular areas of the Subcontinent among South Asian immigrants in Britain, such as the Jullundur Doab and Jullundur areas of India, made up of Jats (Punjabi speakers; Helweg, 1979; Talbot & Thandi, 2004; Tatla, 1999; Tan *et al.*, 2000), the Mirpur Azad (Kashmir) region of Pakistan, the

region of the Mangla Dam (Talbot, 1996) and the Sylhet region of Bangladesh (Gardner, 1995).

The pattern of the South Asian migration to the UK has changed over time. Initially men came on ships, worked as peddlers or took low paid work with the intention of working for a limited period, alongside the educated East African South Asians who mainly did clerical jobs (Tinker, 1977).

MIGRANTS

The terms ‘migrants’ and ‘immigrants’ are used loosely to refer to people who have come from another country to live and work. Migrants are those who plan to go back to their country of origin (Anwar, 1998), and ‘immigrants’ are those who move abroad for permanent residency (newer migrants). However, in the case of Europe, those with different facial features or cultural practices, such as wearing the *hijab* or traditional dress, are seen as non-white people or immigrants. This could disadvantage many members of the white migrant population, such as Polish or Irish migrants, who are themselves disadvantaged (Black, 1987; Bhopal, 1990).

TWICE MIGRANTS

According to Watson (1977: 8), the East African Asian were the filling or the ingredients in the sandwich (colonial), on one say they were superior to the local population, however, they were still inferior to the Europeans” they were what you can say, the bridge between the boss and the workers, they were well educated (men and women), and spoke English fluently. They had to leave East Africa after the political turmoil which forced many of these skilled workers to immigrate to other Western countries. Those that came to the UK initially worked in low paid jobs and became upwardly mobile once the opportunity arose (Robinson, 1993).

THRICE MIGRANTS

What makes my research unique is that the new migrants being studied were thrice migrants. For example, Malayalam-speaking men in my study first moved from Kerala to Mumbai/Delhi, then to the Middle East (Clarke *et al.*, 1990; Parekh *et al.*, 2003), and finally moved to the UK after getting married. The women in this group, who are also Malayalam, came first and then the men followed, as compared to the pioneering group which was made up of mostly men or the twice migrants whom were families. Other new migrants, such as Tamils from India and Sri Lanka, came along with their families. They were also from the Western coast of India, which had a significant Christian community.

SOUTH ASIAN RELIGIONS

Britain has undergone a transformation from a deeply-rooted Christian country to a multi-religious society. No researcher can study the religious groups of Hindu, Muslim, Jain and Sikh seriously without an understanding of their beliefs, lifestyles and culture in order to gain their trust. ‘There are reportedly at least over 200 gurudwaras, 200 temples and 500 mosques in Britain in the early 1990s: this number would have increased greatly’ (Tatla, 1999; Lewis, 1994). For most of the South Asian participants in the study, religion plays a fundamental role in their day-to-day lives. The most significant and visible aspect of the South Asian life in the Diasporas is the construction of places of worship and the conduct of *melas* (*Festivals*) which preserve their heritage and language. For example, in Leicester, every year *Diwali* is celebrated as an annual event in the council calendar, with huge pomp and grandeur.

For most South Asians in the UK, whatever their religious background, there is a strong bond between religion and culture, which they bring with them from their country of origin, and religious cultural activities, which are intertwined with their culture, bring a feeling of home

away from home. For instance, during the Muslim holy month of Ramadan, women will join together to prepare food for the breaking of fast (*Iftar*), or for the Hindu festival, *Navratri*, for nine days women from the community will help in cooking food that should not contain any vegetable grown under the ground. The Sikh community sees a lot of joint effort from wider community in preparing their daily communal food called *langar*. The caste system followed by South Asian Diasporas in the UK is based on a hierarchical system of social status and ritual purity. Even among Sikhs and Muslims, who consider the caste system taboo, there is a strong desire to find a suitable partner for one's family within one's own caste or social status (Ballard, 1992; Shaw, 2000).

Within Hinduism, two main principles of *karma* and *dharma* are widely practiced. Principles of *karma* are related to the belief that life, death and suffering and pain are in the hands of God and that one's fate cannot be prevented. South Asian Hindus in the UK may assume, for these reasons, that CHD is not preventable. The principles of *dharma* are related to the belief that in order to get *moksha*, ultimate freedom from suffering, and one has to go through all phases of *dharma* from being a child to a grandparent (Lobar, 2006 and Wilson, 2006).

Even within the Muslim community, there is significant ethnic diversity. The participants in the study came from East Africa, Pakistan, India and Bangladesh. In spite of geographical diversity, all members of the Muslim community base their Muslim faith on five main pillars: *Shahada* (confession of faith in one God), *Sawn* (fasting), *Salaat* (prayer), *Zakat* (almsgiving) and *Hajj* (pilgrimage). There has been little research done on the South Asian Christians in the Diaspora. Even though they have come to a country that is predominantly Christian, they still have their own churches and services in their own languages, and tend to marry within their own community.

SOUTH ASIAN JOINT-FAMILY SYSTEM (JFS)

South Asians families are often a closely knit group. In some cases, three generations of a family lives under one roof. The advantages of the JFS include the support of grandparents performing childcare and the ability of the family to pool in money or to work as a family business. South Asians are very proud of their heritage and culture, and they always try to maintain close ties with their extended families. Certain principles and traditions closely followed by members of the South Asian Diaspora are obedience to elders, arranged marriages, and maintaining “honour”. Most of them try to discuss family matters within their groups, and there is a sense of family pride and shame due to the actions of certain individuals. Due to this sense of family honour, divorce rates are relatively low within South Asian communities.

HEALTH BELIEFS & HEALTH BEHAVIOR

There is a close connection between health beliefs, health behavior, lifestyle and culture. During the onset of CHD, one’s health behaviors and lifestyles are influenced by health beliefs, which in turn are influenced by one’s culture. According to Bury (1994), lay health beliefs are especially important to those involved in the process of designing and delivering health education messages. Personal beliefs about health and illness have a huge impact on health behaviors. In order to provide health care that recognizes the cultural diversity of patients, it is crucial to understand the various health beliefs and subsequent health behaviors of people from the Indian Subcontinent. Health beliefs vary by both socioeconomic status (Macintyre *et al.*, 2006) and ethnicity (McAllister & Farquhar, 1992). Furthermore, not all health beliefs are transformed into health behaviors, but they play an active part in triggering future health change. Health beliefs vary not only between the South Asian migrants and the indigenous ethnic group, but also amongst the migrants’ countries of origin, including India,

Pakistan, Bangladesh, east Africa, the Middle East and the USA. Like health beliefs, health behavior is influenced by socioeconomic group, ethnicity, education, age, and gender (Turrel *et al.*, 2002; Turrel *et al.*, 2003; Beydoun & Wang, 2008). Specifically, health behavior includes those activities that people adopt in order to maintain sound health and prevent diseases at an early stage.

Even though the eating habits of South Asians are varied, there are common threads in the preparation of food. For example, in South Asian cuisine, vegetables are usually overcooked, and the food tends to be high in saturated fat from meats, dairy products and certain vegetable oils like coconut and palm oil (Enas, 2000). With migration and an enhanced standard of living, many South Asians have begun to consume meat more frequently. Similarly, Indian sweets and desserts (a delicacy within the Subcontinent), usually only consumed on special occasions, become regular items in the diet among migrant communities (Anand *et al.*, 2000; Enas & Senthilkumar, 2001).

The increased susceptibility of South Asians to CHD has been attributed not only to the damaging effects of a unhealthy lifestyle, which causes an increase in cholesterol levels, but also to inadequate consumption of fruit and vegetables. This lack of consumption consequently produces a deficiency of antioxidant Vitamins A and C, which is compounded by the habit of the consumption of ghee, a clarified butter rich in cholesterol oxide (Gupta, 2002). The risk of CHD reported in South Asians is similar for both vegetarians and non-vegetarians (Enas *et al.*, 2007).

HEALTH BELIEF MODEL (HBM, 1974)

The Health Beliefs Model, or HBM, is used widely in CHD studies. The main concept of the HBM is that an individual has an expectation that changes will take place, and thus the probability of a person adapting to a health-related behaviour is based on how much he or she

believes that the treatment and recommended behavior will personally affect them and reduce the threat. This model focuses on five factors: the perceived severity of the trigger, perceived threat of trigger, perceived benefits of the treatment or behavior, perceived barriers to treatment that the patient identifies, and the patient's self-efficacy. The core purpose of the HBM is to find out why people do not take advantage of preventive measures such as adopting a healthy lifestyle. For example, a South Asian middle-aged man with a family and children comes to the smoking clinic to give up smoking. He feels he wants to give up because of the huge cost associated with it (*perceived benefit*). He believes that there could be a link between smoking and future health problems concerning his heart (*perceived threat*) and has seen some close family friends die (*perceived severity*). He is doubtful of the medication offered by the smoking cessation advisor, and one of the main reasons he finds it hard to stop smoking is because of stress and family pressure (*perceived barrier*).

SELF-EFFICACY THEORY

The Self-Efficacy Theory (Bandura, 1977) is based on the concept that an individual is confident that they can work towards change. Thus, those with high levels of self-efficacy have a better chance of making changes and sticking to them. One of the other main aspects of Self-Efficacy Theory is that it suggests the importance of an individual's internal drive to make changes in their personal health.

TRANSTHEORETICAL MODEL

The Transtheoretical Model recognizes that not every individual is keen to change their health behaviors. The Transtheoretical Model is not a linear model, because it views health behavior change as a process during which individuals are at various stages of willingness to change. Individuals can enter and exit at any point of behavior change and may also repeat a stage many times.

Prochaska (1979) described five stages of behavior change, including pre-contemplation, contemplation, decision, action and maintenance. Prochaska and Velicer (1997) proposed that individuals progress through different stages sequentially, but usually revert to previous stages before achieving maintenance. The tenets of this model have been applied in the past 20 years to a range of health behaviors such as smoking cessation. For example, a new South Asian migrant who smokes one pack of cigarettes a day understands that smoking in the UK is expensive. For some time he manages to get a regular supply of cheap duty free cigarettes from his friends, and continues to buy UK taxed cigarettes when he needs to. He is, however, aware of the cost (pre-contemplation). His wife convinces him that she is expecting their first child and that he needs to stop smoking (contemplation), as she is aware that passive smoking is dangerous to the health of both the mother and child. He speaks to his family doctor and signs up for a smoking cessation session and decides that he wants to quit (decision). At the smoking cessation session he is offered various nicotine replacement therapies. After speaking to his GP he decides that he prefers *Zyban* because of its high success rate; he works on issues, such as stress, which will trigger his desire to smoke again (action). To feel good about his new healthy behavior, he spends money on himself and realizes by stopping smoking (maintenance) he has not only saved money, but can taste and smell things better.

Not all researchers are keen to use this model because of the difficulty in ensuring validity in maintaining and checking for consistency at different stages (Whitelaw *et al.*, 2000). According to Vetter (1991), no single model can solely be used in health promotion to bring changes in individual behavior. Factors like racism, socioeconomic position and poverty have a detrimental effect on patients' overall health, and must also be considered. For example, poorer South Asian families will not buy fresh fruits and vegetables, because they lack an understanding of the nutritional values of these foods. Thus, these families will not eat the recommended five daily portions of fruit and vegetables, will lack awareness of how to cook

a healthy South Asian meal, and will use processed foods without understanding how to read labels.

CONCLUSION

The combination of genetic, cultural and social factors has a significant impact on the incidence of CHD in the South Asian community. The perception of risk due to CHD by the South Asian cohort is socially and culturally constructed and poses challenges to health care professionals trying to promote healthy lifestyle changes amongst these patients. In the next chapter I will describe in detail the risk factors associated with CHD in the context of Asian migrants in the UK

CHAPTER THREE

RISK FACTORS AND HEALTH PROMOTION

In the previous chapter, I discussed the health beliefs and behaviours of South Asians and highlighted the differences between various groups based on their religion, language, caste and pattern of migration. This chapter will draw together knowledge on the epidemiology of CHD in South Asians from current research. It will also look at successful national projects aimed at the treatment of those suffering from, or at risk of, developing CHD, and highlight the risk factors involved, in addition to looking at the current level of service provision in relation to accessibility and appropriateness.

Introduction

Cardiovascular disease is the leading cause of premature death and is a major cause of disability in the United Kingdom (Hippisley *et al.*, 2007). The rate of cardiovascular disease, however, varies considerably amongst ethnic minorities, which could reflect increased susceptibility and differential exposure to risk factors within these groups (Cooper *et al.*, 2003). Past studies tended to combine South Asians into one group, when in reality there are a number of subgroups with differences in the risk factors they are exposed to and, thus, the outcomes of diseases (Patel & Bhopal, 2007). The variation in risk factors among South Asians was clearly highlighted in the Newcastle Health Survey (Bhopal *et al.*, 1999). According to this study, Bangladeshi men had higher smoking rates, but lower systolic blood pressure when compared with Indian or Pakistani men (Bhopal *et al.*, 2005). Zaman and Bruner (2008) found that even by adjusting the prevalence of diabetes and metabolic syndrome, South Asians tend to have higher risk than the indigenous white European population.

Some researchers have suggested that one reason why South Asians are susceptible to CHD is that their cardiovascular profile is 40% higher than the rest of the population, and that their overall cholesterol/HDL ratio tends to be higher than indigenous groups (Bhopal *et al.*, 1999; Bhopal, 2000). Even among South Asians there are differences in mortality rates, especially among Bangladeshis (Bhopal *et al.*, 2005). It has been shown in various studies that the average age at the time of myocardial infarction for South Asians is around 50 years, compared to an average age of 56 years in whites (Hughes *et al.*, 1989). High LDL cholesterol or cigarette smoking are the most common risk factors for the indigenous European population, whereas the most common risk factors amongst South Asians include low HDL, high triglycerides, high lipoprotein and a marked predisposition toward metabolic syndrome, abdominal obesity and diabetes. In the West of Scotland study (Shepherd, 1995), treatment of those suffering from CHD with pravastatin resulted in a significant reduction in nonfatal myocardial infarctions and death. Even though the prescribing of statins in recent years has increased significantly, they still vary in effectiveness between health authorities and GPs and between patients on the basis of gender, demographics and deprivation (Primatesta & Paulter, 2000; Majeed *et al.*, 2000). Patel *et al.* (2005) highlighted that lipid lowering drugs are prescribed less frequently to South Asian patients and in some studies even beta-blockers were denied to them.

Burden of Cardiovascular Disease (CVD)

Cardiovascular Disease (CVD) is a global health problem reaching epidemic proportions (Murray & Lopez, 1997). According to 2003 reports by the World Health Organization (WHO), CVD caused approximately 29.2% (16.7 million) of all deaths globally in 2003. 80% of these deaths occurred in low and middle income countries. It was expected that by 2010, the leading cause of death in the developing world would be CVD. The breakdown of figures of the WHO 2003 study clearly shows that of the 16.7 million CVD deaths, 7.2

million were due to ischemic heart disease (IHD); 5.5 million were by cerebrovascular disease; and the remaining 3.9 million deaths were from hypertension and other heart conditions (Anand *et al.*, 2000; Farooqi *et al.*, 2000).

CVD affects people in their middle age, and a significant proportion of them need expensive clinical care, which in turn undermines their socioeconomic development of the families of sufferers, and the developing world generally (Rankin & Bhopal, 2001). In general, there is a greater risk of disease and mortality among people from lower socioeconomic class. A similar trend is emerging as the cardiovascular epidemic matures in developing countries.

Correlation of Geography to CHD

The last few decades have not only seen an increase in migration in developing countries from rural to urban, but also the transition of disease from the developed to the developing world. Heart-related disease was once associated with affluence, but today it is linked with poverty, homelessness and those performing manual labour (Murry & Lopez, 1997; Reddy & Yusuf, 1998; Wu *et al.*, 2001). India and China, which have nearly half of the world's population between them, have seen phenomenal changes in the standard of living, including a reduction in infectious disease and changes in lifestyle choices including diet and recreation activities. The resultant increase in life expectancy has, to some extent, increased the burden of CVD and other chronic diseases (Yusuf *et al.*, 2001; Popkin *et al.*, 2001).

Studies from around the world have highlighted that the increase of mortality and morbidity from CHD is much higher in people of South Asian descent, which reflects the comparatively higher risks of CHD amongst the South Asian ethnic group (McKeigue *et al.*, 1989). For example, when compared with populations known to be at low risk for CHD, such as the Chinese (Hughes *et al.*, 1990) and North African populations (Beckles *et al.*, 1986), the age standardised CHD death rates calculated from national mortality data are

shown to be between 3 to 4 times higher among migrant South Asian men than other groups settled in the same country. Even when compared with populations known to be at high risk for CHD, such as the European (Wild *et al.*, 1997) and South African populations (Steinberg *et al.*, 1988), the relative risk for CHD mortality in South Asians was still higher at around 48%. Although minor variations in heart disease risk factor profiles from Indian sub-communities have been demonstrated (Ramaiya *et al.*, 1991), the overwhelming evidence shows that all cultural groups in the Indian subcontinent share an increased risk of CHD morbidity and mortality. Thus, it is reasonable when investigating CHD risk to consider individuals from different parts of the Indian Subcontinent collectively, even though they may originate from a wide range of cultural backgrounds.

There are two important observations about the high rate of CHD among South Asians. Firstly, the high rates of CHD are common to South Asian populations residing around the world (Yusuf *et al.*, 2001), which raises the crucial point that any environmental factor which might explain the high rates of CHD in South Asians must be common to all major ethnic groups of the Indian Subcontinent, of both sexes, and persist several generations after migration. Secondly, the relatively high risk for CHD and Type 2 diabetes in South Asians does not decrease with subsequent generations (after migration). That is to say this high risk of CHD and Type 2 diabetes remains higher than the rates in other ethnic groups in the same country. For example, in Singapore, all three of the main ethnic groups (Chinese, Malay and Indian) have experienced rapid economic growth, but the occurrence of diabetes is much higher among the Indian ethnic group than among the Chinese (Hughes *et al.*, 1990). The study by Hughes *et al.* has become the basis for the view that differences in CHD rates are environmentally, rather than genetically, determined. However, given the contrasting situation of South Asians whose high risk persists five or six generations past migration (McKeigue *et al.*, 1989), a genetic explanation is more likely than an environmental one.

The consistency of the high risk of CHD among South Asian people in several studies conducted around the world, affecting both sexes and an early onset of CHD, particularly in men, has driven research to identify what factors contribute to this excess risk. The speculation is that there must be a common underlying explanation for the elevated CHD risk.

South Asians Around the World

A large number of people of South Asian origin have immigrated to countries around the world, especially to developed countries like the USA, the UK, Canada, Australia, Singapore, Malaysia and the Middle East (e.g. UAE). Roughly 20-40 million South Asians live outside their country of origin. In the USA alone there are around 2 million South Asian migrants. Migrants in the US were mainly skilled and professional workers, and in the past it was assumed that they had a lower risk of CHD because of their professional background and also because many of them were vegetarians. According to Bhatnagar et al. (1995), those who migrated to the UK had higher levels of cholesterol than their siblings who remained in India. The Kaiser Study and CADI (Coronary Artery Disease in Indians) Study, which focused on physicians, brought to light some astonishing facts. The most startling statistic may be that South Asians were found to be about four times more likely than other ethnic populations to be hospitalized for coronary angioplasty or bypass surgery. The age adjusted prevalence of heart disease according to the Framingham offspring Study, for the age group 30-69, was 25 per 1000 for Indians. According to CADI it was 100 per 1000 for the same ethnic group.

South Asians in the UK

South Asians form around 2.7% of the population in England and Wales (Health Education Authority, 2000) and are the largest ethnic minority group in the UK. Their mortality from coronary heart disease is approximately 40% higher than the indigenous population

(Balarajan, 1996). Most of the South Asians living in the UK are either from the Indian Subcontinent or East Africa. Past studies have combined all South Asians into one group, despite their wide range of cultural, religious and linguistic backgrounds. In the Health Survey for England “1/5th of South Asian men and 1/10th of women have been associated with CHD and stroke.” (Health Education Authority, 2000).

Most of the South Asian migrants in the UK live in London, while smaller numbers of them are spread out in the Midlands, Greater Manchester, Merseyside, Tyneside and West Yorkshire. They are generally shorter in physical stature, and the average weight of a newborn baby is 3.1kg; the average weight of a white baby in Britain is 3.4kg (Bhat *et al.*, 2005). South Asians with diabetes and circulatory disease account for nearly 77% of deaths within their ethnic group, while only 46% of Caucasian Europeans die from these conditions (Mather *et al.*, 1998). The South Asian migrants have low levels of HDL cholesterol, increased triglycerides (LaRosa *et al.*, 1999), high rates of homocysteine (Chambers & Kooner, 2001) and lipoprotein (a) (Scanu, 2001).

CHD is the largest cause of morbidity and mortality in the United Kingdom (McKenzie, 2003). The British Heart Foundation Report “Coronary Heart Disease Statistics 2000” indicates, however, that the premature death rate of South Asians who live in the UK is an alarming 46% higher for men and 51% higher for women than the UK average (Best *et al.*, 2001). Although this premature mortality rate from CHD for South Asians is falling, it is not falling as quickly as it is in the rest of the population, indicating that the gulf between the South Asian community and the indigenous British population is becoming wider. From 1971 to 1991 the mortality rate from CHD for 20-69 year olds for the whole population fell by 29% for men and 17% for women, whereas in the South Asian community it fell by just 20% for men and 7% for women. Bhopal *et al.* (2002) argued that although studies (McKeigue *et al.*, 1991; 1993) have proposed reasonable explanations for these rates, no one

factor will explain why the South Asian community has a higher risk of developing CHD when compared with all other ethnic groups in the UK. Williams *et al.* (1994) posited that the South Asian community has a higher degree of non-biochemical risk factors than the indigenous population. Dhawan and Bray (1995) suggested that the reason for the increase in CHD rates among South Asians could be because they have smaller arteries than 'Caucasians'.

An Epidemic in the Indian Subcontinent

Life expectancy in India increased post- independence from 41 to 61.4 by 1991, and it is projected to reach 72 by 2030. As the population lives to an older age, there could be a significant increase in the prevalence of cardiovascular disease (WHO, 2003; Reddy & Yousuf, 1998). The death rate from cardiovascular related diseases increased from 1.17 million in 1990 to 1.60 million in 2000, and it was expected to rise to 2.03 million by 2010 (Trvelgn *et al.*, 2001). In India, surveys conducted over a twenty-year time span reported a nine-fold increase in CHD in urban populations, compared to a mere two-fold increase among rural populations (Jaffar *et al.*, 2003). Some researchers have suggested that since conventional risk factors do not fully answer the rise in death rates among South Asians, impaired fetal nutrition resulting in low birth weight could be a major contributing factor to the prevalence of CHD in the Indian Subcontinent (Syed *et al.*, 2003), and could be further linked to metabolic syndrome, diabetes, and hypertension later in life (Gupta & Gupta, 1996). This association could have a serious effect on the South Asian population, in which fetal and maternal malnutrition is common.

As mentioned earlier, rural communities have lower risk factors for CHD than the more Westernized urban population. However, with the rapid migration from rural communities to urban centers throughout South Asia, the rate of cardiovascular disease is increasing at a

phenomenal pace. Cross-sectional surveys from different South Asian countries have revealed that a higher prevalence of cardiovascular disease in urban populations is associated with a higher body mass index, blood pressure and fasting blood lipids. Because most of the countries in the surveys do not have an established disease surveillance mechanism, which could have been used to estimate the extent of cardiovascular disease, the only reliable sources of data are a study performed by the WHO in 2002 and a few established researchers whose estimation and projections forewarned an epidemic in the next 20 to 30 years. What these countries need are accurate estimates of the disease, risk factors and trends which will help them to formulate better policies and guidelines for prevention and treatment (Zamman *et al.*, 2001; Pandey *et al.*, 1988).

Origins of Heart Disease - From Womb to Tomb: Infant foetal origins of cardiovascular risk (Betteridge & Morrell, 2003)

Research conducted by Barker and Osmond (1986) highlighted a strong correlation between Ischemic Heart Disease (IHD) and post/neo-natal mortality around fifty to sixty years ago. They argued that neonatal mortality is closely related to environmental factors like nutrition, and that the long-term consequences of this may be adult disease and death. In another study of the same sample set, Barker *et al.* (1989) also linked weight at birth and one year of age with death rates from IHD 50-60 years later. Men with the lower weight at year one stood the highest risk, while those with an increased weight had a gradually increased risk. Other groundbreaking studies highlighted this correlation between low birth weight and CHD among men and women in Europe, North America and India (Stein *et al.*, 1996; Forsen *et al.*, 1999).

People with low birth-weight and those who are obese as adults had the highest levels of impaired glucose tolerance. (Hales *et al.*, 1991). Fall *et al.* (1995) linked low weight at year

1 and increased death rates from coronary heart disease in the UK. Weight gain during the first 12 months of life is associated with a reduced CVD risk. The health and well-being of the mother is very crucial to the development of the baby. Gestational diabetes within the South Asian population is approximately 5-6 times more prevalent than amongst Caucasians. Children born to mothers with gestational diabetes stand a higher chance of being obese or acquiring type-2 diabetes in later life (Rich-Edwards *et al.*, 1999). According to Brooks *et al.* (1995), small women have small babies, and the mother's nutritional status is one of the most modifiable factors. Neonatal size is also related to maternal diet. Other researchers like Phillips *et al.* (2000) have identified relationships between stress and raised serum cortisol concentration to low birth weight. Kuh and Ben-Shlomo (1997) clearly show that CHD can result from slow foetal growth linked with malnourishment or as a consequence of living conditions.

In developing countries like India, Pakistan, Bangladesh and Sri-Lanka, many babies are undernourished because their mothers are malnourished (Harding, 2002). South Asian babies born in the Indian Subcontinent and even in the UK have been found to be in the range of 2.6-2.9kgs, which is lower than the average in developing nations. According to Barker *et al.* (2002), because of the imbalance of energy distribution, certain areas are nourished, such as the brain, while others are neglected, such as the tissue repair process, with fewer cells in kidneys, which has an impact on blood pressure etc. later in life (Keller *et al.*, 2003). Some babies will try and catch-up as they mature, from one extreme end of being under-nourished to the other of being over-nourished. A study of the different cultures in Kuwait, which has a large immigrant population comprising approximately 67% of the national total, found that Indian-Asians had the smallest babies and Egyptians had the biggest. (Alshimmiri *et al.*, 2003). Studies conducted in two Indian cities (Mysore, an urban city, and Pune, a rural area) showed contrasting results. Mothers who spend more

energy (Rao *et al.*, 2003) and have a lesser BMI have a much lesser chance of developing gestational diabetes; however the babies tend to be smaller (Rao *et al.*, 2001). In a John Hopkins study of medical students, which was carried out over 37 years, men with depressive illness had double the risk of CHD (Ford *et al.*, 1998).

Risk factors in children

Since the earliest reports of changes in the arteries of young soldiers killed in combat in Korea, pathological evidence has been steadily accumulating. Twisk *et al.* (1996) concluded that body fat is related to hypercholesterolemia. Many of the risk factors can be tracked from childhood into adulthood; obesity during childhood is a strong predictor of risk during adulthood. Rona *et al.* (1996) reported cardiovascular risk levels in children are associated with obesity. Astrup *et al.* (1992) reviewed research on energy consumption, and concluded that children with a genetically determined predisposition to obesity become obese when they are exposed to a particular range of environmental conditions. Studies have shown that overweight adults who were underweight as a child have a higher risk of diabetes (Serdular *et al.*, 1993).

Wincup *et al.* (1989) studied children across 9 towns and found that the pattern of systolic pressure difference in children was similar to that observed in the study of middle-aged men, and that the standardised mortality ratios for cardiovascular disease in adults was associated with the mean systolic blood pressure. Agyemang *et al.* (2002, 2004) found that higher diastolic blood pressure (DBP) in South Asian boys was consistent with higher DBP in South Asian men. Thomas and Avery (1997) reported that Pakistani children were less likely to eat fresh vegetables every day than their Caucasian counterparts, and with a similar

population in Bradford, Type 1 diabetes was much higher in South Asian migrant residents than the general population. (Feltbower *et al.*, 2002)

The Bogalusa heart study identified that young men dying before the age of 25 had fatty streaks, while Knuiman *et al.* (1980) found a strong correlation between the total cholesterol in children and the prevalence of CHD in adults. The relationship between physical activity and body mass in children is not consistent. Studies by Tell and Vellar (1988) concluded that lean children were more physically active, whereas Strazullu (1988) did not find much difference. Recent reports have highlighted the link between television and obesity in children. Comparisons of CHD risk in genetically similar sub-groups and in twins have shown that the similarities in risk factors among younger people are not entirely due to genetic factors. Pre-adolescence and early adolescence make up a period in a child's life where lifestyle habits are shaped. Longitudinal and interventions trials indicate that changes in lifestyle accompany changes in CHD risk.

Shaukat and de Bono (1994) concluded that South Asian children who have CHD have lower insulin sensitivity than European children. Another study, from the inner city of London, found that participants' diets were unhealthy in comparison to government recommendations. Of those surveyed, nearly 70-75% did not meet the recommended daily intake of fibre; only 19% eat any kind of vegetables. Resnicow's (1991) study showed that those who skipped breakfast had significantly higher blood cholesterol levels than those who did not, and that those eating high fibre cereals had the lowest cholesterol levels.

What are Cardiovascular Risk Factors?

The term *risk factor* includes not only patho-physiological characteristics of the individual, but also other aspects of his or her life such as diet and behaviours such as smoking. There used to be a belief that the discovery of such predictive variables might point the way for

preventive efforts, even though identification of such variables does not necessarily establish aetiological relationships. A risk factor is a causative agent or condition that can be used to predict an individual's probability of developing a disease. Although many risk factors have been identified, only 60% of the variables that lead to CHD have been explained (Bhopal *et al.*, 1999). The term 'risk factors' were first used by Kannel *et al.* (1961), and the risk factor concept itself is derived from epidemiological observations. The guidelines for the reduction of risk factors have been derived from epidemiological and clinical studies. Six major risk factors such as diet, diet-related serum total cholesterol (TC), blood pressure (BP), obesity, diabetes mellitus (DM) and cigarette smoking have been established as the most common reasons for CHD.

The Framingham Heart Study laid the foundations for determining the key risk factors of CHD by identifying three major risk factors: high cholesterol, high blood pressure and smoking, which increase the odds of developing heart disease, stroke or both. The risk of cardiovascular disease can be modified by a number of behavioral changes or by treating hypertension and lipid disorders (Richardson *et al.*, 2008). Reddy and Yusuf (1998), in their ground-breaking study, highlighted that there are strong links between diabetes, smoking and hypertension. There is growing evidence that high levels of blood glucose, even in a non-diabetic range, increases cardiovascular disease. Other researchers concluded that South Asians have elevated levels of LDL and lower levels of HDL cholesterol, which increases the risk of atherosclerosis, thrombosis, and thrombogenesis.

Risk Factors that Cannot be Changed

Why men and not women?

Men are more likely than women to suffer heart-related illness before the age of 55. Generally, women are 10 years behind men in developing heart disease, and they develop

heart attacks 20 years later in life. By the age of 75, women's risk of CHD catches up with that of men. Various explanations have been put forward for this male-to-female difference, the most common being a hormonal protection for women during their pre-menopausal years. Olson *et al.* (2000) reported that in postmenopausal women there was an increase of 3.4 times in the incidence of coronary events compared to men. This suggests that the removal of the oestrogen producing system leads to an enhancement of the atherosclerotic process.

In South Asians, there is a striking difference in mortality from CHD between the sexes, with men having a six times higher mortality rate than women of the same group (Bhopal, 2000; Bhopal & Sengupta, 2000; Game & Johns, 2000). More evidence has emerged in support of the hormonal protection theory, especially with respect to the importance of oestrogen. Lamarche *et al.* (1997) observed significant increases in triglycerides and low-density lipoprotein (LDL) levels, and a significant decrease in high-density lipoprotein (HDL) in females after the menopause. However, females on hormone replacement therapy showed no such change in either HDL or LDL levels. Tests on animals have also shown a protective effect of oestrogen on the arterial wall, inhibiting atherosclerosis and help maintain vasomotor control (Shah *et al.*, 2001).

Past studies have shown that women suffer from heart attacks around 20 years later than men do. However, women are more likely to die from a heart attack. Women tend to develop softer, fragile, lipid plaques that easily rupture and erode and cause heart disease, whereas men are prone to develop large, hard, fibrous plaques that do not rupture, but which narrow the arteries and cause chest pain. Most women who develop chest pain do not progress to a heart attack, as they are protected by their oestrogen levels. Women tend to have less symptoms of heart-related disease because of the protective factor with heart related disease. Women are further protected for around 10-15 years after their menopause,

except when they are diabetic, smoke or occasionally when there is onset of premature menopause. Post-menopausal women have a risk of CHD that is more than 40 times greater than before menopause. There is an inverse relation between cancer and heart disease. While the risk for heart disease steadily increases with age, the chances of breast cancer peaks at a certain period and then declines gradually (Kuller, 2001). Lipid levels in men reach a plateau when a man is around 50, while women who see a rise of nearly 2gm/dl. A 40 point increase in triglyceride and a 10 point decrease in HDL in turn increase cardiac risk five-fold.

Age

On average, South Asians develop heart disease 10 years earlier than the rest of the population and the death rate for those over 30 is two to three times greater than that of the Caucasian community (Ismail *et al.*, 2004; Hughes *et al.*, 1989). Wright and Roberts (1996) have also shown that Indian doctors in the UK have heart disease around 10 years earlier than their English counterparts. Similar findings have been found wherever Indians have immigrated. For example, in Malaysia and Qatar, where South Asians make up around 10% of the population, they account for 50-56% and 71% respectively of all deaths of members of the population under the age of 40. Similar findings in Singapore have highlighted a tenfold greater mortality rate in Indian men under 30 than in Chinese men of the same age (Yusuf *et al.*, 2001; Venkatesubramanian *et al.*, 2005).

Stereotypically, people think of a typical CHD patient as a middle-aged male. There is a considerable difference in mortality and morbidity between males and females, particularly when taking into account the subgroup of pre-menopausal women. After menopause, the difference in mortality declines. The mortality due to CHD shows a striking relationship to age in both sexes. Death from CHD tends to occur later in life for women, although the rate

increases with age for both sexes. The marked difference in CHD risk in men and women narrows with increasing age. However, the new British Heart Foundation Report 'Coronary Heart Disease Statistics 2000' indicates that the premature death rate of South Asians who live in the UK is 46% higher for men and 51% more for women than the UK average (Best *et al.*, 2001). The risk of heart disease doubles with every decade of a person's life.

Between 1971 and 1991, the mortality rate from CHD for 20-69 year olds within the whole population fell by 29% for men and 17% for women, whereas in the South Asian community it fell by 20% for men and only 7% for women. Bhopal *et al.* (2000) argued that although many studies (McKeigue *et al.*, 1991; 1993) have proposed reasonable explanation for these rates, no one factor will explain why the South Asian community has an elevated risk of developing CHD compared with any other group in the UK.

Family History

Persons with a family history of heart disease have are two to four times as likely to develop heart disease at a young age. Children of parents who died before the age of 50 from heart disease have a three to six-fold increased risk. Risk increases nearly eight to fifteen-fold in identical twins whose parents died before the age of 50 from heart disease. Those with a family history of premature heart disease stand ten-fold higher rates of genetic risk factors like high levels of lipoprotein. (Barzilai *et al.*, 2003).

Some studies have reported a two- to seven-times higher incidence of myocardial infarction in relatives of patients with myocardial infarction than among the relatives of healthy control subjects. The major risk factors previously discussed may have a stronger impact on those with a familial predisposition for the disease at an early age. This familial risk points to the possible need for intervention based on their specific risk factor profile. It is also quite possible that differences in the genetic and environmental characteristics of the

different populations studied could influence the extent to which family history can be considered as an independent variable for determining the risk due to CHD. In the Framingham study, subjects who had brothers affected by CHD had double the risk (Snowden *et al.*, 1982) while when the risk was linked with their parents the risk was greater by 30% (Schildkraut *et al.*, 1989). Studies have also highlighted that siblings of centenarians have an 8 to 17 fold higher probability of living longer. (Hawkes, 2003 & Barbagallo *et al.*, 1988).

Modifiable risk factors

Tobacco Control

The WHO (1996) estimated that by 2020, Tobacco will become the largest single cause of death, accounting for roughly around 12.3% of global deaths. Exposure to components of tobacco smoke like carbon monoxide affects various parts of the cardiovascular system. Sheps *et al.* (1987) linked exposure to CO with the electrical system of the heart, and Otsuka *et al.* (2001) found that the coronary circulation was affected. Howard *et al.* (1994) showed that there is a thickening of the lining of the arteries in both active and passive smokers (Rosenlund *et al.*, 2001). Smokers also increase their risk of mortality from pulmonary embolism and cancer (Doll *et al.*, 1994).

The average inhalation of cigarette smoke contains 3000-4000 different components, and around 10^{13} different free radicals which enhance the deposit levels of fibrinogen and lipids, which in turn contribute to atherogenesis. HDL levels reduce with an increase in triglycerides and coronary blood flow is reduced which exacerbates arrhythmias or angina. Smoking more than one pack of cigarettes per day for several years increases the risk of Ischemic heart disease by nearly 200%. Henningfield and Benowitz's (1992) research on the

difference between casual smoking and addicted smoking found that smoking more than 5 cigarettes per day with 4-6 mg of nicotine is the maximum threshold.

It has been suggested in past studies that South Asians are emotional people. Work by Glassman *et al.* (1990) and Fidler *et al.* (1992) showed that there is a link between depression, emotion and smoking. Depression is believed to be linked with the availability of neurotransmitters, such as serotonin, dopamine and norepinephrine, chemicals which regulate mood in the brain. Nicotine is believed to facilitate the release of dopamine and norepinephrine that goes to the prefrontal cortex of the brain, the absence of which is implicated in depression accompanying nicotine withdrawal. Although tobacco consumption is decreasing in developed countries, in developing countries its use in every form is increasing day-by-day and will be the major cause of morbidity and mortality in the future.

According to HEA, 2000, 44% of Bangladeshis smoked, compared to 23% of Indian males. Most South Asians do not smoke because of religious and cultural reasons. Smoking rates are very low in Sikh men and in all groups of South Asian women (McKeigue *et al.*, 1991). The Sikh religion prohibits smoking on the grounds that the body is the temple of God, which should not be damaged. Although it is unusual for first generation migrant women from the Indian Subcontinent to smoke, it is becoming more common among younger South Asian women who have grown up in the UK. McKeigue *et al.* (1988) highlighted that among the Bangladeshi older women, smoking rates are high, as with men.

The habit of chewing tobacco is predominant in South Asia with over 10% of the population in Pakistan, 22% of men in India and 16% of men and 21% women in Bangladesh partaking (Zamman *et al.*, 2001). Tobacco usage is prevalent in South Asia as it is smoked, sniffed and chewed in different forms including hukka, bedi and cigarette, in

addition to chewing tobacco in form of pan and naas absorbed through oral and nasal mucous membrane. In a qualitative study, Bush *et al.* (2003) concluded that the higher rates of smoking could be linked to “social acceptance” and “macho status” within South Asian groups. Johnson *et al.* (2000), in the second lifestyle survey, highlighted that roughly 25% of South Asians perceive that there is a link between smoking and heart disease, and the level of understanding of the risk of smoking is inversely proportional to age. McKeigue *et al.* (1993) reported that the rate of cigarette smoking amongst South Asians is estimated to be similar to the national average and that the elimination of smoking from these communities would reduce CHD by approximately 25%. This is seen to be one of the most important predictors of myocardial infarction in this group.

Diabetes

Diabetes is one of the fastest growing chronic diseases in the world. According to Murray and Lopez (1997), by 2020 cardiovascular disease, diabetes and cancer are expected to be the main contributors to the burden of disease in developing countries and account for over three quarters of all deaths. By 2025, it is estimated that there will be around 300 million people with diabetes, up from 136 million in 1995. In developing countries the prevalence of type 2 diabetes has been escalating at a rate of 171% per year, and the age range of developing it is typically between 45 to 64, compared to 64 plus in developed countries. Diabetes causes a twofold increase in the risk of death from cardiovascular disease. In view of the above data, as the number of people with diabetes increases, the prevalence of cardiovascular disease increases proportionately. Oxidative stress plays an important role in the development of diabetic complications .

The main factors contributing to insulin resistance and CHD are hyperglycaemia, hyperinsulinaemia, dyslipidaemia, prothrombotic state and hypertension (Ginsberg 2000).

Hyperinsulinaemia can also increase the systemic blood pressure by the activities of insulin on the kidney. Insulin increases the re-absorption of sodium (Na) at the renal-tubular level, and stimulates the atherosclerosis through increasing blood pressure and cell proliferation (Meigs *et al.*, 2000). Hyperglycaemia also plays a part by promoting atherosclerosis through glycation of collagen and lipoproteins and impaired endothelial function .

Abnormalities in glucose and insulin metabolism are common in patients with high blood pressure. In population surveys, average systolic pressures are around 9mm/Hg higher and diastolic pressure about 5mm/Hg higher for individuals with diabetes or impaired glucose tolerance compared to norm-glycaemia individuals of the same age. In some patients with type 2 diabetes and hypertension, a more complicated underlying metabolic disturbance exists, in which insulin resistance and hyperinsulinaemia have a major role. Previous studies used population-based data and oral glucose tolerance tests, standardised according to the current recommendations of the World Health Organisation.

Most adults with diabetes, of either type, present an excessive risk of CHD compared with non-diabetic persons. Various studies, including a nurses' health study (Hu *et al.*, 2001) and a Finnish study, highlighted a strong link between CHD and both types of diabetes, and diabetic patients without any previous history of CHD have a greater risk than those who are non-diabetic and suffer from myocardial infarction. The combination of type 2 diabetes and previous history of CHD results in a high risk of CHD death.

According to WHO, obesity is low in Asia compared to the Western world, what is on the rise is MS, which is actually causing a significant public health problem (Pan *et al.*, 2008). South Asians have high rates of diabetes and the highest rates of premature coronary artery disease in the world, and studies have shown that it appears in patients 10 years younger than in other populations (Enas *et al.*, 2007; Chaturvedi *et al.*, 2002). South Asians also tend

to have the highest number of people with diabetes than any other region. In 2000 Pakistan had 9 million diabetic people, which is expected to increase to 14.5 million by 2025. In India, the number of people with diabetes is expected to raise three folds by 2025. The pervasiveness of diabetes in the urban centers of Bangladesh is twice that of rural areas . Within the Sri Lankan community, the occurrence of diabetes is 8% in rural areas compared to 12.5% in urban areas.

In a study of 597 participants of Sri Lankan origin living in the UK (Weerasuriya *et al.*, 1998), 21% had CHD, 29% nephropathy and 15% retinopathy. This was emphasized by the study of Abate and Chandalia (2001), which found that the CHD risks for South Asians are twice that of the white community. Death rates from CHD are high (Balarajan, 1996) and it is crucial to intervene by targeting modifiable risk factors like smoking, BP, dyslipidemia .

Different researchers have suggested various reasons for the increased risk of CHD. For example, the increased levels of glucose intolerance are linked with defects in South Asians' insulin secretion. Others like Hughes (1990) mentioned a possible correlation between increased levels of insulin and cholesterol and low-density lipoprotein (LDP) and a negative correlation between high-density lipoprotein concentrations, thereby suggesting that insulin resistance increases the risk of CHD. Others, like Knight (1992), suggested that the risk of CHD within the South Asian population is due to an insulin imbalance, whereby the constant increase in insulin levels and C-peptide in response to the glucose load can be seen in South Asians in comparison with the White British and Afro-Caribbean populations.

The combination of glucose intolerance and insulin resistance strongly suggests a defect in insulin-stimulated glucose uptake in hypertensive patients, leading to impairment of glucose tolerance. As a result, the plasma glucose concentration tends to rise, stimulating beta cells to secrete more insulin. This rise in plasma insulin concentration is associated with a

significant rise in plasma catecholamine concentration, and this relationship is independent of any changes in plasma glucose concentration. As mentioned earlier, women are less prone to CHD before menopause. Based on data received from the DECODE Study Group (2003) and Kanaya *et al.* (2003), women lose their protective guard against CHD after menopause.

In an inner-city study, South Asians receiving diabetic care were less likely than White British patients to have a range of parameters recorded in the annual review, such as blood pressure, body mass index, serum creatinine and feet examination; whereas another study in the West Midlands revealed no difference in diabetic care between White British and South Asians. Chowdhury and Hitman (2008) suggested that special care might be needed for the latter. The study by Mather *et al.*, (1998) showed that diabetes and insulin resistance may account for roughly around 70% of all major Q wave abnormalities in the UK.

Hypertension and insulin resistance

Hypertension is the cause of almost 3 million premature deaths per annum, worldwide, and 28 million DALYs (WHO, 2002). Globally, South East Asia has the highest occurrence of hypertension and the Western Pacific has the lowest. By 2025, it is expected that hypertension in India will increase from 16.3% to 19.4%. The lowest rate of CHD in the region is in Bangladesh with 11.3% (Zamman & Rauf, 1999). Studies conducted by Patel *et al.* (2008) have highlighted that hypertension carries a greater risk of myocardial infarction (MI) for South Asians living in the UK than Whites. Studies conducted by Bhopal *et al.*, (1999 & 2000) had highlighted that all South Asians could not be assessed collectively; for instance, blood pressure in Indians is much higher in comparison to Pakistanis, while Bangladeshi populations apparently have the lowest level of hypertension. Mckeigue *et al.* (1988) concluded that one of the reasons why Bangladeshi men had lower levels of blood

pressure is that they are generally smaller in stature.

Lipid abnormalities and hypertension

Lipid abnormalities have been discovered in patients with untreated hypertension. This represents a change in lipid metabolism, which appears to be secondary to insulin resistance and hyperinsulinaemia. These observations are of clinical importance because insulin is a determinant for blood pressure and lipoprotein levels. This partly explains the frequent association of obesity, hypertension, elevated plasma glucose, lipoprotein abnormalities and the role of insulin in determining CHD and preventive medicine. (Ferri et al, 1999)

Lipoproteins - types and roles

Lipids play a very important role in maintaining the structures of cell membranes (cholesterol, phospholipids), cell growth (cholesterol), steroid hormone synthesis (cholesterol), and energy metabolism (triglycerides). *Low density lipoproteins* (LDL) are the main carriers of cholesterol in plasma. A large number of epidemiological studies have demonstrated a strong relationship between elevated LDL cholesterol and CHD (Frishman, 1998). Studies by Tybjaerg-Hansen *et al.* (1992) documented the link between inherited hypercholesterolemias and elevated LDL; these cases not only show signs of premature heart disease, but also carry the risk of endothelial damage to cell (EC) layers and penetration into arterial intima. Accumulation of LDL in the arterial walls initiates monocyte and smooth muscle cell migration and transforms macrophages and smooth muscle cells into cholesterol-loaded foam cells, which in turn are the major cell components found in atherosclerotic plaques (Brown & Goldstein, 1983). LDL is the only lipoprotein that does not contain Apo-E.

High density lipoprotein (HDL) is called ‘good’ cholesterol, because having high levels of it protects against heart disease and heart attack (Bersot *et al.*, 2003; Mohan *et al.*, 2001). Its

main function is to carry excess cholesterol from the inner linings of the artery walls to the liver, protecting against inflammation and excessive blood clot formation (Gaziano *et al.*, 1999). Cardiac disease increases nearly fourfold with low HDL, compared to a twofold increase with hypertension. HDL levels remain the same for men throughout their lives, and decrease for women after menopause. Usually HDL levels are around 10mg/dl, higher for women than men. South Asians (Miller & Kwiterovich, 1990) have low HDL levels for both men and women, and they also have a lower level of large-sized cardio protective HDL and more of the small HDL (Castelli *et al.*, 1986). In the Framingham study, those below 40mg/dl had the highest risk of heart attack and those above 60mg/dl had the lowest, irrespective of their total cholesterol (Aarabi & Jackson, 2005; Cappuccio *et al.*, 2002; D'Agostino *et al.*, 2001). Studies have shown that low levels of HDL can also result in restenosis, stroke and metabolic syndrome. South Asians also tend to have a high TC (total cholesterol)/HDL ratio (Boizel *et al.*, 2000).

Obesity

The WHO estimated that by 2025 there would be around 300 million obese people worldwide. Alarmingly, this estimate was reached by 2000. A decade ago it was estimated that roughly half of the obese people in the world live in developing countries (Visscher & Seidell, 2001).

A number of studies have documented higher rates of obesity among South Asians (Wang *et al.*, 1994; Mckeigue *et al.*, 1991; Shaukat *et al.*, 1995). Different researchers have different opinions about the use of the waist-hip ratio (WHR) to determine obesity. Bose's (1995) study of 262 white adults and 100 Pakistani males concluded that truncal obesity might not be a CHD risk factor among South Asians, based on his finding that central adiposity was related to elevated blood cholesterol in whites as compared to South Asians. Mckeigue *et al.*

(1991) concluded that central adiposity was related to diabetes and CHD risk, and WHR was 0.98 among South Asians, 0.94 among Europeans and 0.94 among Afro-Caribbeans.

Central obesity is a surer indicator of CHD than generalized obesity (Donahue *et al.*, 1987), and the association with glucose intolerance, insulin resistance and other metabolic disturbance are stronger in central obesity than in peripheral obesity (McKeigue & Sevak, 1994). In a recent hypothesis by Sniderman *et al.* (2007), it is suggested that the reason why South Asians might be more susceptible to the metabolic complications of obesity than white people is because their primary adipose tissue compartment is less developed. Wells (2007) linked excess obesity in South Asians to cycles of “feast and famine” based on the evolutionary past in which South Asian ancestors stored fat quickly in intra-abdominal depots in times of food surplus for utilization in times of food scarcity. This is related to past studies that have shown that the Indian Subcontinent was frequently hit by famine.

Diet and Nutrition

The South Asian population in Britain is diverse but can be divided into three main groups: Indians, Pakistanis and Bangladeshis. Between these groups, differences in lifestyle exist even though they follow similar dietary patterns (Bhopal, 1986). The Indian diet, which consists of high fat content, deep fried snacks in between meals (such as *pakodas* or *samosas*), meat cooked in ghee and vegetables seasoned with salt, has harmful effects on the health of the heart. The traditional daily diet of the average South Asian is well balanced and healthy (Bulliyya, 2000), more so in the traditional agrarian lifestyle of the Subcontinent (with plenty of physical activity), but migrants from India who find themselves in a more affluent environment tend to go to excess in the high-end traditional delicacies, particularly meat and ghee. Additionally, many of the younger generation have

now developed Western eating practices and have started consuming fast food, which is high in fat and rich in calories.

Studies into the dietary habits of South Asian groups living in the UK eating a traditional Asian diet indicated that 36% of their total calories intake is from fat (Singh *et al.*, 2002), which is slightly higher than the recommended intake for the European Union (33.5%). Although the overall percentage of fat is similar to that consumed by their White European counterparts, it is the proportion of saturated fat in the South Asian diet which is the greatest cause for concern. Gregory *et al.* (1994) found that South Asian families purchased large quantities of foods that are high in fat content, with ingredients such as butter, full fat milk, eggs and ghee. South Asians also deep-fry their food more often than whites and Africans, who frequently use other cooking methods (such as grilling, boiling or poaching).

One of the distinctive characteristics of Indian cooking is the use of ghee, which is pure clarified butter, heated at very high temperature until it loses all its moisture, resulting in a pure, saturated cooking fat. Fatty acids of the n-6 series account for more than 75 percent of the polyunsaturated fat in the British diet. These fatty acids are contained in vegetable oils like corn oil, sunflower oil and soya oil and in margarine made from these oils. The value of substituting saturated fat with polyunsaturated fat to reduce the risk of heart disease is still uncertain. The increased intake of polyunsaturated fats lowers total cholesterol levels, but may also lower high-density-lipoprotein cholesterol. (Gama, 2002)

Research carried out by Shaw & Pal (2002) indicated that although South Asians are aware of the need to reduce their fat intake, they lack the knowledge on how to regulate and

achieve a healthy diet. His study gave clear evidence that most South Asians know that ghee is unhealthy, so they substitute it with cooking vegetable oil. They assume that vegetable oil is less harmful than ghee, and that it therefore may be used liberally. Other researchers have also found that while South Asians recognise the ill effects of ghee, many continue to use it as they consider it to be an essential ingredient contributing to the taste and texture of traditional foods; also, the liberal use of ghee is associated with wealth and prosperity (Singh *et al.*, 1997). It is not only the method of cooking and the fat content of foods which are issues (Reddy *et al.*, 2002), but also the prolonged cooking of vegetables, which is common in Asian households, resulting in the destruction of up to 90% of their foliated content. It has been indicated that foliate deficiency leads to raised plasma homocysteine levels, which raises the risk factor of developing CHD in South Asians. (Chambers *et al.*, 2000).

Due to the common assumption that Asians and ill health go together (Singh *et al.*, 2002), the community is unsure of the value of its traditional diet. This problem is compounded by the pressures on immigrants to adopt some of the worst aspects of the British diet. Other factors influencing this change are messages from the media and health professionals that are contradictory and confusing – such as the manner in which curries are equated with “fried food”. Often the problems of the Asian diet are highlighted while none of its advantages are noted. In fact, the NACNE recommendations are very close to the traditional vegetarian diet of some Asian communities, and Mann (2002) recommended that nutrition-based education should underline the positive aspects of traditional diets. It is important, furthermore, that health professionals give clear nutritional advice and that the South Asian diet is not viewed as a significant cause for elevated incidence of CHD amongst these communities, although it remains an important factor (Health Education Authority, 2000).

Lack of physical activity

Physical inactivity is an established independent risk factor for CHD, stroke, hypertension, obesity and osteoporosis (Fentem, 1991). Three important studies have highlighted that being physically active reduces the risk of CHD substantially: a study of Harvard alumni (Paffenbarger *et al.*, 1978); civil servants (London); and one of London double-decker conductors (Morriss *et al.*, 1953). For those who are inactive, the relative risk ranges from 1.5-2.4 times compared to active individuals; however, other lifestyle risk factors also come into play. Nevertheless, when looking at possible ways to reduce risks for both CHD and diabetes, physical activity is an important tool (Patel *et al.*, 1995).

Increasing physical activity level is likely to benefit the South Asian communities who adopt a sedentary lifestyle after migration from their countries of origin (Douds *et al.*, 2002). In addition to controlling obesity, it also helps in reversing insulin resistance. More importantly, studies suggest that physical activity is especially effective in mobilising centrally deposited fat, which is typically associated with the development of insulin resistance. There is also strong evidence to show that regular physical activity prevents or delays the development of high blood pressure and can reduce blood pressure in people with hypertension, a major precursor to CHD (Fall *et al.*, 1995).

The Newcastle Heart Project (Bhopal *et al.*, 1999) established that people of European origin were more active and that Bangladeshis were the least active. Furthermore, the males within the study were more active than females, with at least a minimum of 30 minutes of moderate activity 5 days a week, except for the Pakistanis, where the females were more active. The National Health Survey for England (2001), which studied men and women from social classes 5 to 1, showed a reverse trend; Bangladeshi professionals were more active than other groups. This supports Bhopal *et al.*'s finding (2002), that an improvement in social status improves one's lifestyle.

It has not been easy promoting exercise among Asian communities, as exercise is viewed as a chore by this cohort, and not as a pleasurable experience. This situation becomes more complex when trying to relate to the needs of a culturally and linguistically diverse community. Even those who wish to participate may lack the information and confidence necessary, and they may also have different perceptions or even lack access to facilities (Britton *et al.*, 2004). Johnson (2000) and Chondala (2001) found that outreach work was the most effective way of including the participants of ethnic minority communities in sports. Outreach provided face-to-face contact with the community and allowed service providers to gain awareness of the community's need and difficulties (Sahrif, 1997). This, in turn, led to partnerships between a variety of voluntary and statutory agencies in an effort to meet those needs appropriately. Bhopal *et al.* (2002) also found that there could be a correlation between socioeconomic position and physical activity.

Studies from around the world highlight the benefits of being physically active. According to the British Regional Heart Study (BRHS), an average of 40-60 minutes of walking per day reduces risk considerably. Moderate activity is achieved when a person feels warm and out of breath, by walking at a speed of 3-4 mph, cycling, swimming, dancing, golfing, vigorous housework and gardening and walking an average 9 miles/week, producing a 21% reduction in death rates.

Risk factors that contribute to heart disease

Metabolic Syndrome (MS)

Diabetes and coronary artery disease are the two conditions that play a significant role in metabolic syndrome (Enas *et al.*, 2007b). Past studies have underestimated the prevalence of metabolic syndrome by 25-50%, because South Asians start developing metabolic abnormalities at a lower body mass index and waist circumference than other groups. The

National Cholesterol Education Program's definition of metabolic syndrome is three or more risk factors, in contrast to the WHO definition of two or more. Metabolic syndrome is a constellation of multiple factors, including insulin resistance, abdominal obesity and high blood pressure. It is estimated across the world that people with metabolic syndrome are at increased risk, up to thrice as likely to die from and four to five times as likely to have a heart attack or stroke compared to people without MS. Asians have a lower BMI and waist circumference but can still have high insulin resistance, so the WHO has recently changed the BMI cutoff for obesity in Asians to greater than 23kg/m^2 with a waist circumference $> 90\text{cm}$ for males and $> 80\text{cm}$ for females (WHO, 2004).

Several studies done on South Asian immigrants have proven that they generally suffer from hyperinsulinemia, raised triglycerides, low HDL cholesterol levels and abdominal obesity, with the high waist-to-hip ratio indicating a condition of insulin resistance and high incidence of cardiovascular disease (Potts & Simmon, 1994). Recent studies have shown that metabolic syndrome is more prevalent in the urban population of India (Yajnik, 2001) and Pakistan (Nishtar, 2004).

The very high prevalence of high waist-hip ratio among men (0.95) and women (0.85) and abdominal obesity in urban men (39.1%) and women (70.9%) as well as rural subjects (men 32.4% and women 42.3%) was reported from Delhi. Among the Sri Lankan population, a ratio of 18.2% was labeled as leading a sedentary life. Studies conducted by the Pakistan Medical Research Council (1998a) highlighted a 10% prevalence rate of obesity amongst rural males and 20% amongst urban females from Pakistan. Epidemiological data reveals that in South Asia the incidence of metabolic syndrome and type 2 diabetes is increasing markedly at a lower level of BMI than in the West. Interestingly, a great proportion of South Asians have low HDL cholesterol and a genetic predisposition to insulin resistance, contributing to the significantly higher prevalence of metabolic syndrome and type 2

diabetes.

Alcohol

Mortality from CHD in men and women aged 20 to 69 born in the Indian Subcontinent is 36% and 46% respectively, higher than the average population. In contrast, men and women born in the Caribbean Commonwealth countries have CHD mortality rates which are lower than the general population (Department of Health, 2000), even though their chances of dying from stroke are higher than average.

The correlation between alcohol and CHD is similar across different age groups (Mukamal *et al.*, 2003) when compared to other risk factors, which increase with increasing age (Fuchs *et al.*, 1995). Different people have different tolerance levels of alcohol intake (Grant & Litvak, 1998). Murray *et al.* (2002) found that light and social drinkers increase their CHD risk twofold when they binge drink occasionally, as compared to the same type of drinkers who never binge. Several other studies have highlighted that there is increased CHD mortality during weekends or on Mondays (Chenet *et al.*, 1998; Evans *et al.*, 2000). Small quantities of alcohol have been shown to have some beneficial effects, working as protection against heart disease (Rehm & Gmel, 2003). However, the health benefits associated with this need should be carefully balanced against the high incidence of diabetes within the South Asian communities and the impact it has on the liver and other organs (Douds *et al.*, 2003), as well as the cultural and religious appropriateness of promoting alcohol use, particularly in Muslim communities. Most studies have found that the risk was much lower in moderate drinkers and higher in those who did not drink or drank very little. The average recommended amount is 30g of alcohol a day, which could reduce risk by 25% (Rimm *et al.*, 1999), compared to 113g of alcohol which increases the risk of CHD (Corrao

et al., 2000b). Most sudden cardiac deaths are caused by arrhythmia and cardiomyopathies (Britton *et al.*, 1998).

Studies have shown that South Asians consume alcohol less frequently than Caucasians (Balarajan & Yuen, 1986); however, in a survey of mental hospital admissions for alcohol related diagnoses by Cochrane and Bal (1989), the admission rate for South Asians was 75 per 100,000 admitted, compared to 49 per 100,000 for the white community. South Asian men are more likely to drink than women. Based on religious beliefs, an average 72% of Hindu and Sikh men drink, in comparison to just 3% of Muslims (McKeigue & Karmi, 1993; Ahmed *et al.*, 1998; William *et al.*, 1994; Denscombe, 1995) carried out another survey in GP surgeries in Manchester and Liverpool among South Asian men and a few women who drank. Approximately 4% were alcohol dependent, and roughly 3% were classed as heavy drinkers. Orford *et al.* (2004) also found that 4% of Sikh men drank to excess. Morjaria-Keval (2006), in a qualitative study using grounded theory, highlighted that religion plays a crucial role among South Asians in relation to alcohol consumption.

POVERTY & PSYCHOSOCIAL STRESS

Earlier studies by Marmot *et al.* (1984) and McKeigue *et al.* (1989) did not find any link between stress, poverty and South Asians' CHD mortality but studies have now emerged which suggest that the reason could be because the government did not think it was feasible enough to address poverty and related factors. Many qualified South Asians found it difficult to do menial jobs, and those who did find such jobs were subjected to abuse and neglect. In a Whitehall study of UK civil servants it was highlighted that South Asians had nearly three times the risk of CHD compared to their white counterparts doing the same jobs (Whitty *et al.*, 1999).

Although a direct physiological link has not been established between stress and CHD (Cox, 2001; Farooqi *et al.*, 2000), reports have highlighted a correlation between hypertension and psychological stress such as depression and racist discrimination. Hypertension is the most common disease affecting the heart and the blood vessels and has both genetic and environmental causes. Lifestyle strategies used to control hypertension, such as alterations in diet, smoking habits; physical activity and reduction of stress provide protection from developing CHD (Williams *et al.*, 1997).

Hemingway *et al.* (1999) described the four specific psychosocial determinants of CHD as: 1) anxiety and depression; 2) hostility and type A personality; 3) job-related stress; and 4) low social support, all of which are common among South Asians. Two studies (Krieger, 1990; Krieger & Sidney, 1996) linked blood pressure with racism, even in those groups who mentioned that they had experienced the least amount of racism in society. The General Health Questionnaire (GHQ) reveals that South Asians experienced the most amount of stress, especially women, Muslims, civil servants, and South Asians who do not speak English. Depression is more common among South Asians than among their white counterparts working the same job. Although the South Asians often had higher qualifications (Hemingway *et al.*, 2001), they had to work twice as hard, had no control over the outcomes of the jobs and were least likely to be promoted (Bosma *et al.*, 1998)

Hippisley-Cox *et al.* (1998), in a study conducted on 5623 patients who were registered in one general practice, found that men who were depressed had a much higher chance of heart disease than women. South Asian communities in Britain continuously become victims of stress, as the prevailing culture clashed with their traditional norms and practices, as Balarajan (1992) stated:

Most immigrant Asian communities have maintained their cultural identity and traditions even after generations of overseas residence. This tradition incorporates a premium on academic and economic success; a stigma attached to failure, the overriding authority of elders (especially parents and in-laws) and expected unquestioning compliance from younger family members. However, interpersonal disputes particularly in relation to marriage and lifestyle, the pressures of economic competition with the loss of self esteem associated with failure, and the anxiety attached to non-conformist behaviour have been cited as causes of stress amongst these communities.

Members of the Asian business communities work extremely long hours, usually in sedentary occupations (Williams *et al.*, 1994). Many women work at home, working as machinists and homemakers, in addition to being self-employed. They do not benefit from the occupational health services provided by large employers and do not have the advantages of work-based health strategies. Minority ethnic groups living in an alien and hostile culture face both direct and indirect discrimination in many areas of their daily lives. Some of the problems they face are limited access to health care, inadequate housing and the constant fear of discrimination, resulting in high stress levels which adversely affect their health (Logan *et al.*, 2004).

The above sections detailed the classic risk factors and risk factors modifiable by lifestyle changes in relation to the development of CHD. Previous studies (Williams *et al.*, 1994; McKeigue *et al.*, 1994; McKeigue, 1989) have shown that these risk factors alone do not explain the increased incidence of CHD in these communities. The Research Unit in Health and Behavioural Change (RUBHC) reported in “Changing the Public Health” (1995) that “The most constantly observed characteristic of the patterning of the incidence and

prevalence of disease in the population is of a gradient in morbidity and mortality rates, which is closely linked to social class”.

Therefore, there is sound evidence to indicate that social class has a strong influence on premature death rates due to CHD. An estimated 1 in 3 of all deaths under the age of 65 years resulting from social class inequalities are attributable to CHD. Premature death rates in male manual labourers are 58% higher than non-manual workers, and premature deaths in non-manual workers are two times higher than among non-labourers (BHF, 2000).

Health promotion issues faced by minority ethnic groups and good practices

Health is influenced by physical, social, economical and cultural factors. It is possible to achieve good health by placing individually located changes in a wider context, which will promote and facilitate these choices (Thorogood *et al.*, 1994). One of the aims of health promotion is to increase the opportunities for good health behaviour by making healthy choices easier (Stojcevic *et al.*, 2001), perhaps through influencing the development of health and public policy. The aim of the health education is also to provide individuals with the knowledge, skills and confidence to make these healthy or informed choices.

These aims can be effectively achieved, with regards to minority ethnic groups, if health professionals have adequate knowledge and understanding of the cultural. This, of course, is in addition to an understanding of their “health beliefs”. It is essential, therefore, that these factors are taken into account in the production and planning of effective health education and promotion campaigns for South Asians.

APPROPRIATE HEALTH EDUCATION

It is important that health care professionals have an inclination for health education for ethnic minorities to focus on areas that have traditionally been particular to those communities, rather than areas which are commonly shared with the indigenous population. At a time when Asian communities were facing an epidemic of CHD in the 1970s and 1980s, public health was focusing on pregnancy, child birth and family planning. Furthermore, campaigns such as the “Stop Rickets Campaign” and the “Asian Mother and Baby Campaign” blamed defects in cultural practices as the causal factors for the problems of Vitamin D deficiency and the high barriers these communities faced in assessing available healthcare.

In the past, emphasis was placed on cultural differences and they were promoted as root causes of the community’s health problems; this includes an emphasis on diet in relation to CHD amongst South Asians. In this way, health education for South Asian communities has tended to locate health inequalities in presumed individuals or to recognize supposed culture shortcomings. There is therefore a need to include participation from these communities in order to develop successful health promotion initiatives, which ensures that what is actually needed is provided, as opposed to providing what is perceived by professionals to be needed. Methods of health promotion for members of minority ethnic groups must positively address issues and accommodate religion in order to appropriately encourage interest and compliance. Anwar (1996) stated that one of the major barriers to the formulation and delivery of effective health education amongst ethnic minorities is the generally lower educational status of members of the ethnic minority groups educated outside Britain. This lower education leads to decreased autonomy. Generally, health and education lead to increasing degrees of autonomy, and to be unhealthy and uneducated leads

to decreasing autonomy, and consequent loss of power and control over one's health status (Bhopal *et al.* 2002).

Peacock *et al.* (1995) and Modood (1992) indicated the ineffectiveness of written material translated into variety of Asian dialects as a medium of communicating with non-English speaking communities. The inevitably multilingual setting, in which health promotion schemes and programmes for minority ethnic groups must be carried out, creates a set of challenges and problems which may be difficult to overcome, especially when a medical professional deals with a patient's education in the areas of CHD and diabetes. Rimm (2004) suggested that discharge advice may be fully understood by post-coronary patients, and nurses may not have a clear idea of the ethnic backgrounds and modifications that could be suggested. She emphasised the need for health professionals to promote the message about diet and lifestyle more aptly and effectively by reaching out to people in the community, cinemas, temples and mosques. Those who do not speak English or have less interaction with the community may be accessed through local community radio.

UPTAKE OF/ACCESS TO SERVICES

People from ethnic minority groups are less likely than the general population to take steps to maintain or improve their health, according to a report from the Health Education Authority, carried out by the Market and Opinion Research Institute in 1992-3. This report looked at people's perceptions of health, use of health services and attitudes and concluded that there needs to be better targeting of services to different demographics by providing information about the full range of primary care services available.

Evidence indicates that consultation rates with GPs are higher among ethnic minority groups than the general population (Cox, 1998). In England, the Black and Minority Ethnic Group's (BMEG) Health and Lifestyle Survey of 1994, highlighted this issue, and similar

differences were also revealed in the analysis of the General Household survey data (Balarajan *et al.*, 1991) and the third and fourth national GP mortality surveys (Stanner *et al.*, 1997). Attempts to assess the outcomes of the BMEG survey concluded that frequency of use provided no indication of the quality of services received. The results of the in-depth interviews of bilingual interviewees in their mother tongues, using a national field force of 150, yielded key findings as follows:

- The average time spent waiting to see a GP in the surgery department was considerably longer for all ethnic minority groups than the general population.
- Ethnic minority respondents were less likely than the general population to be happy with the outcomes of their consultation.

These results reveal that there is an inability amongst primary care services to address the needs of ethnic minority patients.

Coronary Heart Disease Equity Profile (2001) indicated that there exists a lack of equity in access to CHD health care and to procedures such as angiography and revascularisation. This is chiefly apparent in the East and North East Primary Care Groups area in Leeds. These areas have a high level of deprivation and have particularly high ethnic minority populations. However, despite evidence of greater need, as demonstrated by high CHD mortality rates in these areas, access to these procedures is inequitable.

BARRIERS TO SERVICE ACCESS

The evidence to indicate that there is a lack of appropriate service provision for primary prevention, primary and secondary care and rehabilitation services for this group is abundant. This lack of provision has resulted in the inevitable lack of service uptake from sections of the community amongst whom the need is greatest. Studies have shown the lack

of effectiveness of educational programmes amongst South Asian communities when it comes to diabetes and CHD management (Britton *et al.*, 2004). However, due to greater predisposition to these diseases and earlier onset in people from these communities, it is important that awareness-raising activities amongst these communities are undertaken in an effective manner, which will then reach those who are at a greater risk of acquiring CHD.

CULTURAL BARRIERS

Cultural beliefs and practices are influenced and altered by formal and religious educational factors, age, gender and socio-economic factors, and an individual's cultural background has an effect on their diet, way of dressing, religion, language and family structure. Bush *et al.* (1993) indicated health education information was not reaching members of minority ethnic communities, and that the information that was getting through was often inappropriate in cultural and linguistic terms. The report highlighted the importance of the provision of appropriate information, where it was emphasised that it is often fear, through lack of information, which makes people unwilling to use medical services.

Furthermore, healthcare workers lack knowledge about cultural and religious beliefs create additional barriers for potential service users. McLeod (2010) suggested that the ability of people to make use of services is affected by the ability, and indeed inclination, of staff, particularly medical and nursing staff, to understand different cultural practices. Indeed, it has been found that people from ethnic minority groups will be unwilling to use hospitals, physiotherapy services and community health services unless their needs are met appropriately in terms of diet, religion, language and social customs. The Race Relations Code of Practice in Primary Care reported that primary healthcare services have been found to be not sufficiently sensitive to the full range of racial, religious and linguistic diversity in Britain.

COMMUNICATION BARRIERS

In many studies of ethnic minorities' views of health services, communication emerges as one of the most fundamental barriers to promoting good health and accessing services. Anwar's (1996) report on ethnic minorities' inability to make use of the *Patients Charter* described patients' right to be given detailed information on local health services. He concluded that common barriers to services uptake by minority ethnic groups include a lack of information about the range and availability of services, language and communication barriers and patients' lack of confidence in the ability of the services to meet their needs. The study consisted of 77 respondents who were questioned about their views, experiences and knowledge of health services. It was highlighted in this report that the questionnaire was difficult for respondents to complete, and that in the next phase of the study, in-depth questions would be used in the interviewee's language of choice.

Hu *et al.*'s (2002) research found that it was these same linguistic barriers, in conjunction with barriers in literacy, which resulted in reduced awareness amongst South Asian women about the risk factors for CHD, as compared to South Asian men.

INTERPRETING

It is often difficult for migrant patients to negotiate what happens to them in hospital on their own terms. This is particularly true for female patients, those from a different culture and those who do not speak English. It is common practise in the NHS to use relatives of patients who cannot speak English as interpreters. This includes the use of children, a practice which is far from satisfactory, as their presence may be inappropriate, particularly when sensitive information of a personal nature is being discussed. As Flores (2006:231) explains:

“family members, friends, untrained members of support staff, and strangers found in waiting rooms or on the street are more likely than professional interpreters to commit errors that may have adverse clinical consequences”

RACISM

Racial discrimination can be defined as:

Less favourable treatment of individuals or groups on the grounds of their culture, colour, and race, and ethnicity, religious or national origin (Karlsen, 2004: 109)

Research indicates that access to health services is hindered by institutional racism. Cox’s (2000) research identified the inherent beliefs that the NHS is, at present, organized to suit the needs of the white middle class, who speak and read English, and on the whole have the same cultural beliefs as the senior medical staff, enabling them to communicate their needs reasonably well. Although difficult to prove, there is evidence from individuals who have experienced or witnessed discrimination in the NHS. It was not until 1995, when the Policy Studies Institute undertook a study to help health authorities address discrimination, that results definitively showed that there was racial discrimination in the NHS. This report indicated that despite the Race Relations Act and subsequent initiatives to combat racial abuse or harassment of ethnic minority users and staff, racism was rife among both staff and patients (Amin, 2003). Institutionalised racism manifests as a reduced access to services and a reduced quality of care where services are provided. As Gupta (1996) concluded, ethnic minority clients experience negative attitudes and ignorance from nursing and midwifery professionals. Therefore, the quality of care is not the same as with other groups.

EXAMPLES OF GOOD PRACTICE

PROJECT DIL

Project Dil (*dil* is Hindi for ‘heart’) is an initiative set up in Leicester (UK) which recruits people to work as peer educators to help stem the high rates of heart disease among the South Asian population in the Midlands. The project director, Dr A. Farooqi (2000), argued that the typical method of translating material is not always effective, and a new approach is needed. Peer educators are provided with a high quality education from medical experts. As a result, they deliver useable information and sustainable health education activities. For example, one peer educator is involved in role-play for practice nurses, to teach them how to run an effective CHD clinic. Another is developing a walking scheme for patients with angina or myocardial infarction who are referred by their GP. Equally important, the educators are influencing their family and friends and social contacts. Dr Farooqi believes the project’s principles are transferable, and hopes the project can influence others to adopt such an approach.

HEALTHY HEART PROJECT

Similarly, the Healthy Heart project, based in Oldham, aims to achieve a sustainable reduction in CHD amongst the Bangladeshi population. The Healthy Heart project hopes that, by raising awareness, they will induce the community to invest in an initiative to tackle the issue of CHD and have a real impact on improving the quality of people’s lives. This is to be done by increasing awareness amongst both the community and service providers through the promotion of physical activity amongst community members, by providing support to people to stop smoking, by promoting a healthy diet and by providing healthy food through supporting allotment projects.

Conclusion

This literature review has outlined the main risk factors for CHD, many of which are believed to be modifiable with changes in one’s lifestyle. I have also discussed the possible

material and structural barriers that people from South Asian communities face when considering the adoption of these behavioural and lifestyle changes, and the failure of the statutory sector to provide services efficiently for these communities. Services are provided to these communities, but not adequately. The habit of chewing tobacco is predominant in South Asia, with over 10% of the population in Pakistan, 22% of men in India and 16% of men and 21% women in Bangladesh partaking. The lay perception of CHD in South Asian communities is a culturally and socially constructed challenge to health care professionals trying to promote healthy life style changes amongst these patients. In the next chapter, the methodological approach used to conduct this current body of research will be elaborated. The research paradigm, data collection and analysis will be discussed.

CHAPTER FOUR

STRATEGY AND METHODS

INTRODUCTION

The previous two chapters discussed risk factors in relation to coronary heart disease (CHD) and how this condition affects South Asians (SA) in a Western culture. This included discussions of the various routes of migration, the uniqueness of different groups (within the context of South Asia) and the influence of caste and religion on the migrant community. It is important to recognise the uniqueness of the migrant South Asians in the UK, which is different from other Western and affluent societies. The overall aim of this research was to gain insights into understanding of CHD among South Asian migrant men in the UK and to provide a descriptive and interpretive account of that experience.

This chapter is to do with the methodology and strategies used in the study. The exploration of research methodology began with an exploration of research philosophy (debate between positivist and subjectivist traditions) and justifying the selection of the subjectivist

approach. A number of strategies were evaluated and phenomenology (Heideggerian Hermeneutic) was justified and chosen. An in-depth exploration of the data collection method (focus groups) was undertaken. The chapter is split into 4 sections, describing the journey from the conception of the study through the process of data analysis, highlighting personal reflections of the researcher throughout all the procedure and in the order they occurred.

RESEARCH PHILOSOPHY

A research philosophy is a belief in the way data should be true, analyzed and gathered. The term epistemology encompasses the various philosophies of research; doxology is that which is believed to be true. The purpose of science, then, is to transform things believed into things known. In Western traditions of science, the two major philosophies are the positivist (sometimes called scientific) and interpretivist (also known as anti-positivist) schools (Cousins, 2002).

A BRIEF HISTORY OF POSITIVISM

Positivism has always been closely associated with physical and natural sciences, since the eighteenth and nineteenth century. It has always been prominent in natural sciences. It carried with it the notion that the only valid form of knowledge is that discovered by scientific research (Porter, 1993). These disciplines (including epidemiology, social medicine, and sociology) placed a lot of significance on quantification and measurements (Haase & Myers, 1988, p.128). Pawson (1989), a strong critic of positivism, argued that it is not possible to obtain unbiased observation of the world since we do not all construct our worlds within the same framework. For example, surveys could quantify and magnify the problem where each and every one of the participants could have an understanding of risk factors, but will not be able to capture the real and in-depth meaning and values which are

usually generated with the help of group dynamics. Positivists believe that reality is stable and can be observed and described from an objective viewpoint (Hughes & Sharrock, 1997).

The aim of this study is to gain ontological insights into the understanding of CHD among migrant men (83 in total, divided in three locations across England). In seeking an understanding of these experiences, the researcher recognised the limitations of the positivist approach especially since the understanding of risk factors (related to CHD) is relative to individuals and their contexts: there will be difference in thoughts, feelings, behaviours, practices and level of fulfilment. The positivist approach cannot deal with this variety of results because it does not provide any explanation for or an understanding of the subjects' experiences. Another limitation in using positivist approach is the inability to quantify feelings such as anxiety and satisfaction that do not form objective data. Humans are not always objective, and their behaviour, feelings, perceptions and attitudes are subject to many influences that positivist research would reject or fail to measure.

POST- POSITIVISM

In contrast to positivism, post-positivism is based on the belief that reality is not a fixed or an objective phenomenon, but a process of social construction (Ferguson *et al.*, 1992). The main philosophy of post-positivism is the discovery of people's (individually or group) opinions, feelings, experiences and in-depth understanding rather than superficial exploration by the researcher. In other words, an understanding of real life experiences from the participant's viewpoint (Hoepfl, 1997). I personally feel that this philosophy blends well with the aims of this study: unlike scientific objects (positivist), people attach meaning to their actions and these meanings are a result of specific values that mediate between what is in the world (CHD and risk factors) and how they are perceived by members of a group in

society (South Asians of different religion and caste). Others researchers like Pawson (1989) do not encourage an outright ban on statistical methods, but instead emphasise the use of the right methods to reduce bias in data collection, like the use of *external* and *internal* concepts (external dealing with the social world and *internal* dealing with perceptions, opinions and values); for example, if a positivist approach is used to measure *internal concepts*, it will result in participants giving a variety of interpretations due to inconsistent and unreliable data.

The other criticism of the post-positivist approach is that it lacks reliability, validity in a conventional sense, transparency and in some cases it is unable to replicate findings with different religious groups. For example, opinions on the consumption of alcoholic drinks are varied. Christian groups in my study have different points of view and some consider it permissible while others participants had a totally different understanding. Among Sikh participants, it is a widely accepted practice; on the other hand, some Muslim participants found it taboo even to speak about alcohol. In order to capture the essence of South Asian men's understanding of CHD, a phenomenological research design was used with focus groups to gather data. Chapter four provides an overview of the participants of the study, data sources, collection methods, and the rationale for the qualitative phenomenological research design. Other concerns over credibility and dependability, research bias and study limitations will also be addressed.

THE DESIGN AND PLANNING PHASE

Qualitative research has diverse techniques and philosophies. The three approaches of grounded theory, ethnography and phenomenology are considered as potentially relevant to this study. For me personally, this was very challenging as they shared similarities in describing what happens at any given situation. All three of the strategies offered a means

of exploring the understanding of coronary heart disease among the South Asian men. After carefully considering literature and weighing in the pros and cons of each strategy, I finally concluded that phenomenology (Heideggerian Hermeneutic) was most suitable for my research.

PHENOMENOLOGICAL STUDY

According to Ary *et al.* (2002:426)

A phenomenological study is designed to describe and interpret an experience by determining the meaning of the experience, as perceived by the people who have participated in it.

What is unique about phenomenological experience is that it is subjective, and I have followed Moustaks's (2004) recommended four stages in conducting research using phenomenology. Firstly, a phenomenon to study was identified; in this case, the understanding of CHD among South Asian migrant men. Secondly, the researcher had to "bracket out" his own understanding, assuming that nothing was known about the South Asian men. Thirdly, data was collected from numerous participants (83 in total) using focus groups. Fourthly, the data was analyzed and presented using quotations from the participants. Themes were shared and categorized using rich detail. The sample size in most phenomenological studies is small as compared to grounded theory wherein the size and number cannot be anticipated until they reach a saturation point, and the themes generated are used in the follow-up interviews.

Through this study, I hoped to gain insight into the experiences of South Asian migrants in Britain, from the perspective of healthcare. All participants selected in this study were males of South Asian origin, above the age of thirty, fluent in a South Asian language, and living in areas with a significant South Asian community. A phenomenological approach highlights the living experience of South Asians and their understanding of CHD, which is

expected to be unique as different groups have different religious, educational, and language backgrounds. Phenomenology is best suited for this study because the research question seeks to understand how individuals experience a phenomenon.

What the thesis does focus on is the subjective experience of the South Asian participants through research design, with the intent of ‘capturing the voice’ in what Van Manen (1990) describes as obtaining a “grasp of the very nature of the thing”. The data is collected directly from the phenomena being studied. As Albert Einstein said:

A human being is a part of a whole, called by us universe, a part limited in time and space. He experiences himself, his thoughts and feelings as something separated from the rest... a kind of optical delusion of his consciousness. This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few persons nearest to us. Our task must be to free ourselves from this prison by widening our circle of compassion to embrace all living creatures and the whole of nature in its beauty (Firman & Gila, 2010: 27)

In this research, my pre-understanding is the starting point in this phenomenological study, and I will identify my assumptions rather than getting rid of them.

Heidegger: Phenomenology

According to Lavery (2003), Heidegger’s phenomenology (ontology) is focused on studying the nature and relations of being “what does it mean to be a person?” Heideggerian ontology is distinct from Husserlian phenomenology (epistemology) of “how do we know what we know?” Epistemology seeks to understand what we know about the world, compared to ontology that concerns itself with what exists.

In Heideggerian phenomenology the researcher is in the world, is part of the research process, and should establish a rapport between the participants. Heidegger’s philosophy is also closely linked with three elements: language, space and time. Language is a key part of this research, as it is through language that we are concerned with speaking and listening to

the unspoken, and silence is regarded as a source of speech. In this research I used the help of translators on two occasions. I can speak three South Asian languages (Hindi, Tamil and Malayalam). I noted the body language and silence during the interviews, which helped me to be 'in the world', and try to fully understand the respondents' experiences. According to Heidegger (1962), space is a reflection of a person's real world. In order to fully understand the South Asian migrants, a basic understanding is needed of their lives, their reasons to migrate, the impact of religion on their day to day lives, and the influence of culture. A person's existence is closely related to time. Past, present and future, all play an important role in experiencing an event. The influence of health promotion in their country of origin could have an impact on their understanding of CHD in UK.

Some of the drawbacks of using Heideggerian phenomenological methodology are:

- (a) The research has not been developed and not considered to be true and valid, because this philosophy states that knowledge is never independent of interpretation.
- (b) It is time consuming
- (c) There may be a bias towards the researcher's pre-understanding of the subject.

THE PILOT STUDY

By doing a pilot study, I gained an experience of the methodology. I could test the questions and also identify problems and issues that might occur in a major study. This experience was invaluable to me as I wanted to revise one or more aspects of the project. According to Polit and Hungler (2002), pilot studies are trial runs of the major study, the sole purpose of which is to obtain information for improving the project, or assessing its feasibility. The reactions and impressions of individuals that participated in the pilot study were a valuable source of information. After the pilot study was concluded and assessed, I made a few minor changes in order to eliminate or reduce any problems that may occur.

I tried and conducted the main study in the same way as the pilot in order to get an overall understanding of the issues and problems amongst South Asian men. As mentioned previously, I knew three of the thirteen groups from my previous work experience and church. The personal acquaintance I had with the participants could generate more valid and meaningful information. However, Hewit-Taylor (2002) warned against insiders' bias and the possibility of trustworthiness and the quality of the study being at risk.

The pilot study was conducted in the Beeston area of Leeds, in the dining area of the Gurudwara (Guru Nanak Nishkak), with the help of six men, who understood and spoke Punjabi and Hindi fluently. Most of the participants lived around the area and belonged to the Ramgarhia caste from East Africa. The pilot study influenced and shaped the main study. It offered the opportunity to pre-test the literature, the interview guide, the research method and the ethical challenges. Overall, there were no major setbacks in implementing the study. However, there were a few lessons learnt that did have implications for the main study. The initial participants' information leaflet, consent form, and interview guide (ICI), were in English. One of the participants in the study wanted to have them in Punjabi. The researcher sought the help of DB (translator used) to translate them into Punjabi, Urdu, and Bengali. Later the researcher found that the Punjabi participants could not read and write in Punjabi; this was a costly lesson for the researcher. The money spent on translation was a waste, especially when some of the participants were illiterate.

PARTICIPANTS' QUOTES FROM THE PILOT STUDY

The following are quotes from the pilot study conducted in Leeds:

Psychosocial factors

Participants felt that stress, family tension, depression and social isolation were the main causes of the higher than average incidence of CHD in their communities, as opposed to more commonly stated risk factors:

I think Asians are born with stress, too many commitments, and cannot say no to anyone; that's why we get many heart problems... too much stress (G).

It is 95% stress and 5% all other factors combined. Although, my brother is 64 years old, over-weight, and smokes 50 cigarettes per day, he has no symptoms of heart disease or angina. He been thoroughly checked by the doctor ... we have it in the family. He has trouble with his knees because of his weight, but not due to heart disease. My other brother, who is slim, had a heart attack at 43; the difference between them is the stress. My younger brother does not get stressed easily, he is a carefree person (N).

South Asians generally, feel that they are duty bound (i.e. have a commitment) to help their family members. Worrying about relatives in the UK and back home in the Indian Subcontinent and Africa is normal. It is usual for parents to get involved in their children's future, education, and marriage.

The researcher adopted the following interview schedule questions from Farooqi *et al.* (2000):

- a. Why do people suffer from or develop heart disease?
- b. Why do Asians develop heart disease?
- c. What part (in developing heart disease) is played by smoking, exercise and diet?
- d. What difficulties do you find in improving your lifestyle?
- e. Do you have any difficulties with the health service (as Asians)?

For the pilot, the researcher asked questions based on questions *b* to *e*. Question *a* was added in the main study, to find out if there was any difference in people's perceptions and influences on the understanding of CHD risk factors (highlighted in chapter five).

LESSONS LEARNT FROM THE PILOT STUDY

Respect Religious Sentiments: It is important to be aware of certain religious or cultural practices. For instance, within the Sikh community, it is important to cover your head even if you do not wear a turban. During the pilot study, I did not possess a cloth to cover my head, and had to buy one from a nearby shop. The lesson learnt was to always be prepared and research the religious and culture practices of the participants thoroughly.

Constant Reminders: Most of the participants needed 3-4 reminders and phone calls, in order to make sure that they would attend the focus groups. The interviews were postponed twice due to weddings and festivals. On two separate occasions, although I knew the participants and telephoned them ensuring that the timings were according to the participants' needs, no one turned up. For the researcher, this was an important lesson: to make repeated reminders, ensure that all demands are fulfilled, and know important religious dates in advance. Even though I knew the participants from my working days in Leeds, I still followed the same protocol with all the participants. All the participants in the study were treated the same and no favoritism was shown to people who I was acquainted with. I followed the same protocols as I did with the other participants.

Developing Key Contacts: Knowing the right people is important and helps in getting to know the community better. In Asian culture, it helps to know certain elders or leaders of the community ("gatekeepers"). The researcher being an Indian, and doing his PhD in the UK, had its drawbacks due to historical grievances in the Subcontinent. He learnt from this

experience not to tell everyone that he is originally from India, and doing a PhD in the UK, as keeping a low profile always helps.

Extra resources: During the pilot study, the researcher had trouble with batteries and the tapes getting jammed. This taught the researcher to carry extra recorders, batteries, tapes and USB sticks. It is important to back up all data, collected during the research throughout the day, onto CDs.

Data Collection

RECRUITING PROCESS

According to Gubrium & Holstein (2002), participants are selected on the criteria that they would have something to say on the topic, be within the age range, have shared similarities, and have no issues talking to each other and even with the interviewer. A total of eighty-three participants were recruited to form thirteen focus groups in three different parts of England (Leeds, Leicester and London [East Ham]). Community centres in these locations were contacted through letters. When there was no response, I decided to try and contact the community managers and religious leaders via telephone. After numerous attempts, and with the help of known members of the community, I finally managed to conduct the interviews. Before any participants were recruited, around three to four visits were made to the group's leaders. Normally the *first visit* was to explain in detail the objectives of the research. The leaders would then meet with the members of the community and find out if anyone was interested. Posters were put up in different languages (see Appendix). The *second visit* was to fix the venue and arrange an appropriate time and date; and finally, the *third visit* was to meet the group itself and explain to them about the study and its objectives.

INCLUSION CRITERIA

- Male
- South Asian origin
- Age: 35 years and above
- Living in either Leicester, Leeds or East Ham

INTERVIEWS

Reasons why I chose focus groups instead of individual interviews were that interviews are time-consuming to undertake transcribe and analyse. One of the biggest issues I faced was the lack of co-operation and time commitment by the participants. Individual interviews allow participants to express their personal views, but a group setting helps them to debate and clarify what others in their community believe about certain issues; for example, an ethnographer uses interviews to study practices peculiar to certain culture or cultural groups. On the other hand, a phenomenologist makes use of interviews for two very specific purposes: a means of exploring and gathering narrative materials that may serve as a resource for developing a richer and deeper understanding of human phenomena, and the interview itself, as a conversational relationship with the interviewee about the meaning of an experience (Van Manen, 1990). For example, most Pakistani participants in Leeds were taxi drivers, smokers, and their first child was a girl. It was possible to know such personal information only because I had worked with them in an organisation during my MSc, and had developed a good relationship with the participants. Participants of focus groups provide instant evidence on similarities and difference. The same evidence from individual interviews is arrived at after an analysis and comparison of the data collected (Morgan, 1984).

Focus Groups

Focus groups are useful to explore people's attitudes, knowledge, experiences and perceptions (Krueger, 1998). According to Hughes *et al.* (1993), focus groups are an ideal way of obtaining information from ethnic minorities as they often find it difficult to express themselves in an interview situation, but are drawn to people who share similar experiences within their communities. Since groups can lead to spontaneous responses, and participation can influence each other by responding to ideas and perceptions, they can be applied to various purposes, either to illuminate concerns or power relations within an existing social group, or in some cases, to expose and provoke individual personal views and experiences (Stewart & Shamdasi, 1990).

According to Kitzinger (1994), using pre-existing groups provides a replica of the natural setting where ideas are formed and decisions made. I used two pre-existing groups that I had used previously during my MSc dissertation. The advantage of not knowing each other helps participants to be confident that certain discussed issues will stay within the group. However, the disadvantage is that participants will not be able to freely express themselves in every aspect, for example, on sensitive issues dealing with ethnicity and community, especially when some of the participants are even related to each other. In most groups, the participants knew each other, and always had something personal to talk about (like someone's marriage, birth of a child and politics back home). All the participants in the groups shared some similarities of religion, caste, and country of origin.

Table 4.1 Time taken with focus groups/ location

Code	Religion	Study Location	Study Conducted/ Time (mins)
P	Muslim	Voluntary Organisation	Mid-day/90
G	Muslim	Mosque	Evening/60
Z	Sikh	Religious Centre	Mid-day/120

M	Christian	Home	Evening/150
S	Christian	Home	Evening/150
R	Sikh	Religious Centre	Mid-day/120
T	Hindu	Home	Evening/150
B	Sikh	Religious Centre	Mid-day/60
L	Hindu	Hired Venue	Morning/60
E	Hindu	Hired Venue	Morning/60
J	Jain	Jain Temple	Mid-day/60
I	Muslim	Voluntary Organisation	Mid-day/120
C	Sikh	Religious centre	Mid-day/120

Focus groups are crucial for this research, as they help the participants to delve into and be involved in the topic highlighted (Patton, 1990), and to explore shared views around sensitive issues. The widespread distribution of South Asian men across the UK would make individual interviews and surveys a tedious job. Moreover, Morgan (1998) pointed out that the amount of time it takes to conduct and analyse eight individual interviews in comparison to two focus groups makes the latter the more efficient. According to Fern (1982), two focus groups of eight persons each generate as many ideas as ten individual interviews. There is also credibility in focus groups through face validity, as each participant's comment can be challenged or supplemented by other individuals in the group.

Table 4.2 Differences from the Farooqi *et al.* (2000) study

Subject	Farooqi <i>et al.</i> (2000)	My Study
Sex of Participants	Mixed Gender	Male only
Location of study	Leicester	Leeds, Leicester, London
Background	Sikh/Gujarati	Sikh, Guj, Pakistani, Bangladeshi,
Languages	Punjabi & Gujarati	Punjabi, Gujarati, Hindi, Bengali, Tami, Malayalam, Tamil Sri-Lankan
Caste	--	See Table 5.3
Other	--	New migrants

I started the interview process by thanking the participants for taking part in the study. I reiterated to all participants that their comments would be anonymous. I talked about the study and explained to them why they were needed. The consent form was discussed in detail to make sure that the participants knew their rights exactly, and could leave the study at any time. The participants were not pressurised to take part in the study. All thirteen interviews were conducted either in a community centre, a home, or a place of worship. This assured that the participants knew the environment. Steps were taken to make sure that the layout of the rooms was comfortable so that the participants felt at ease. We selected the venue for conducting the focus groups according to the convenience of the participants. Table 4.1 highlights the different venues selected and the approximate time for conducting the study. Some participants preferred evenings while others specified weekends. The researcher tried to be as skilful and sensitive to the time constraints of the participants as possible (Kitzinger & Barbour, 1999). The average time taken was 60-90 minutes. It is ethical and good practice to inform the participants of their time commitment. It was important that I kept a careful watch on time, especially because two interviewees were paid for their participation. For the Pakistani and Bangladeshi group, the focus group sessions had to be in before their healthy eating lunch sessions (Wednesday for the Bangladeshi group, Thursday for the Pakistani group).

According to Kitzinger (1994), icebreakers, jokes and anecdotes help to stimulate good discussions. I started the group sessions with an icebreaker; different groups needed different topics to get them started. With the Bangladeshi group, the topic of great interest was about money laundering, which was rife within the community, and the use of agents in sending money home, and money exchanges that had either gone bankrupt or agents disappearing with the money. With the Pakistani participants, the initial topic was more to do with the 7/7 bombing and the impact it had on the community, and some even mentioned

that there was a lot of graffiti and hate messages on the walls and walking alone was not safe anymore, with the presence of BNP supporters, while others were more interested to talk about the news in their local news paper. With the *Sikh* participants there were the issues about the lack of government funding for their projects. The Tamil participants in Newham were more interested to talk about the latest immigration changes, while the initial dialogue with the Malayalam speaking participants was more about the changes in nursing rules, and the new singers from Kerala arriving to conduct concerts around the UK.

Then there was a gradual shift towards the topic, explaining it, what was being requested of the informant (see Appendix). This included the issue of confidentiality, and the right of the informant to refuse to answer any question and terminate the interview at any stage. This phase was more or less a time of getting acquainted and briefing the informant. For the most interviews, I tried to let issues be debated, and only intervened either when there was silence or when it was getting very noisy, as there always were a few participants who only wanted themselves to talk without giving a chance to any one of the others. Tape recorders and field notes play an important role in group discussions. Tape recording requires a reliable recorder and a relatively quiet environment.

I used two tape recorders as a precaution and insurance of clarity (Kvale, 1996). Video recording was overruled in order to maintain confidentiality. Some of the participants were used to being interviewed in the past, which helped to organise the interview without difficulty.

According to Smith (2003), a data collection tool used for qualitative research is called a “topic guide”. It is generally used to ensure that all basic enquiry lines have been pursued with all the interviews. The guides usually include main questions, probes, and follow-up questions. For different languages topic guides were needed, which was a challenge. The

questions were based on the topic guide about South Asians and CHD. Since interviewing involves skilful use of questions of different types, the moderator needs to be sensitive and adapt the methods of control, freedom, and balance, in order to attain a flexibility to use the different types of questions.

Kitzinger (1994) recommended the presence of another note-taker to record important aspects of the group, like group dynamics and non-verbal interactions, and who has spoken and what was said. I had the help of three translators during interviews AF, Dim and AR, who were very helpful in making contacts, as they were well-respected within the community. They helped with speaking to the elders and friends, in Gujrati and Punjabi, and their comments after the interview were very valuable to verify, brainstorm and reassess my notes. In an ideal situation, having a note-taker would be very helpful, but after paying for some venues and attendance charges, certain cost cutting measures needed to be taken, and no room was left for a note-taker in my finances. The researcher prepared for the interview by sketching the seating arrangement for each participant so that he could easily identify all the members. Towards the end of the interview I used the last few minutes for final clarifications, reflection and summary. Only one interview had to be adjourned for a later date, as one of the participants ended up being too emotional and the group was adjourned and reconvened.

ROLE OF THE INTERVIEWER AS AN INSTRUMENT

According to Polit and Hungler (2002: 272), “the interviewer’s function is to encourage those involved in the research to talk”. Since I have a medical background, some of the participants came with the thought that they could get some medical advice. I needed to be aware of my own self and the impact I would have on others, my limitations and strengths,

and my values and feelings (Evans, 2004). My relationship with the participants played an important role in the quality of the data obtained.

Qualities of a good interviewer include listening ability, enthusiasm, sensitivity and compassion (Payne, 2000). I made every effort to show respect to the participants. For example, I covered my head when entering the Gurudwara, removed my shoes when entering the mosque or the Jain Temple, and while meeting the participants. In the Hindu Temple, I accepted *prasad* (an offering to the gods), even though it was against my Christian belief (eating food offered to idols). On several occasions after eating *langar*, as a matter of respect, I helped in cleaning up after the meal.

I was aware of some of my personal limitations, like understanding Punjabi and Bangladeshi languages, and other religions. Some Hindus touch the feet of their elders as a matter of respect, which I found hard to do. However, I was passionate about working with communities and felt proud that I could represent so many South Asians and speak on behalf of those who are vulnerable due to illiteracy and lack of courage to change matters that affected their lives. I also have an experience in both individual and group interviews, and found that focus groups are more interactive and lively. During my MSc in Leeds, the method I chose for the dissertation was individual groups and the data generated was not in-depth and stimulating.

ETHICAL CONSIDERATIONS

Full ethical approval for the PhD study was obtained from De Montfort University Faculty of Health and Life Sciences Ethics Committee, and can be found in Appendix 1. All necessary paperwork including information leaflets, letters of invitation, data collection forms and consent documents can be found in Appendices.

RESPECT FOR HUMAN PRIVACY

Respect for human privacy was observed both when conducting the interview and writing up the results, where all the identifying material was removed. The issue of confidentiality and anonymity was discussed with participants before the study began. They were promised that all data would be kept confidential, all identifying material in this thesis would be changed, and that the transcripts would be kept locked in a cabinet for 7 years.

All their questions were answered in full before they signed the consent form, which is a legal document requesting the participant to give consent to take part in the study. It also reaffirmed their rights as volunteer, such as freedom to withdraw.

PROVISIONS OF TRUSTWORTHINESS

Trustworthiness can be established if the reader can observe my actions, decisions and thoughts, as they are included as a part of this thesis. According to Ary *et al.* (2006), a qualitative researcher is obligated to demonstrate that the methods used can be reproduced, and are consistent; that is, the approach and procedures used were appropriate for the context and can be documented, and the external evidence can be used to test conclusions. The purpose of the following section is to highlight other aspects of the methodology that strengthen the credibility of a study.

AUDIT TRAIL

The audit trail is very important as it provides documentation of all data collection methods and records, like dates and locations of interviews. According to Ary *et al.* (2006), when conducting qualitative research, variability is expected since it lacks the ability to provide a rigid structure. I kept a close record of the data so that I could provide an explanation as to why there is any variance, which increases the neutrality of the study and makes it free from any bias.

REFLECTIVE JOURNAL

According to Ary *et al.* (2006), “the use of self-reflection is to recognise one’s own biases and actively seek them out” (p.507). In order to provide transparency towards any kind of research bias, a reflective journal was utilized. This documentation of reflexivity is an important aspect in the research study, in order to take into consideration the researcher’s limitation. The content of the reflective journal included: (a) a daily schedule and study logistics; (b) a methods log, where decisions and rationale are discussed; and (c) my reflections, thoughts, feelings and frustrations.

PEER REVIEW FEEDBACK

Findings from the data collection and analysis needed to be reviewed by others to provide credibility to the research findings. I was in constant touch with the community centre managers and translators, who helped me with recommendations throughout the research, and adjustments were made accordingly.

Data Analysis

In qualitative research, analyzing data is one of the most critical steps of the research process. The central aim is to work with the data, organise it, break it into manageable units, code it, and search for patterns (Strauss and Corbin, 1998; Robson & Hedges, 1993). According to Ary *et al.* (2006), “Phenomenological analysis involves the attempt to interpret the phenomenon being studied and to grasp an understanding of the relationships between all the information collected from the various sources of data”.

TRANSCRIPTIONS

According to Kvale (1996, p.165), “Transcribing involves translating from an oral language, with its own set of rules, to a written language with another set of rules”. I

translated all the audio recordings into English except groups I & C (I-Bangladeshi in Leeds, and C-Punjabi in Leeds). For validity, large portions of the data were selected and back-translated by DH, a respected member of the community who is fluent in Punjabi, Urdu and Gujrathi. It is not always possible to be objective and accurate while transcribing the reports, but a carefully transcribed report usually meets the requirement. I had the option of visiting the participants a second time if there were any difficulties in understanding the interviews, or for other clarifications.

UNDERSTANDING THE DATA

I reviewed the data after it was transcribed. Audiotape accounts were compared to the transcriptions and changes were made after consulting with those who helped with the transcription and translation. All the field notes and entries in the dairy that I made during the interviews were included in the transcriptions and the observational data to add more credibility to the research methods and the findings.

ORGANISATION AND INDEXING OF DATA FOR INDENTIFICATION

I could have used the numerous computer packages to analyse the data, but this would have required training, and right from the beginning I was constrained by my financial limitations. As mentioned earlier, I had analysed data during my MSc degree, so I proceeded manually. The word processing techniques of cutting and pasting, colour coding (each group) and the use of spreadsheet helped with the indexing and retrieval of data. Each group had a specific colour code so that during the analytical coding processes, data could be cut and pasted, indexed into analytical coding processes and documents, and the characteristics of the each transcript could easily be identified. An example of how the data and quotes were coded and indexed is illustrated in Appendix 3. Before analysis commenced, I checked each transcript and made sure that there were no names or places

that could identify the participants. Only I could match the research to the interviews with the participants. All the data was identified using these codes.

CODING THE DATA

Codes serve as the fundamental means of developing the analysis by summarising and synthesizing the data. According to Miles & Huberman (1994) , researchers use codes to pull together and categorize a series of otherwise discrete events, statements, and observations that they identify in the data. The coding process used: (a) open coding, (b) integrating codes into prescriptive categories; and (c) grouping prescriptive categories and developing themes. There are no fixed rules for analysing data, which makes summarising the findings difficult. The data could be less representative, since there were only 13 groups from different religious and lingual backgrounds.

Table 4.3 Colour coding

Code	Religion	Study Location	Colour
P	Muslim	Voluntary Organisation	Dark Green
G	Muslim	Mosque	Green
Z	Sikh	Religious Centre	Dark Blue
M	Christian	Home	Violet
S	Christian	Home	Plum
R	Sikh	Religious Centre	Blue
T	Hindu	Home	Brown
B	Sikh	Religious Centre	Light

			Blue
L	Hindu	Hired Venue	Orange
E	Hindu	Hired Venue	Light Orange
J	Jain	Jain Temple	Gold
I	Muslim	Voluntary Organisation	Bright Green
C	Sikh	Religious centre	SkyBlue

I colour coded every group for easier identification in data analysis. Coding of the data was the most time-consuming process in the analysis. Table 4.4 highlights the colour coding allocated to each group and sub-group.

The colour coding is as follows:

Shade of green was for the Muslims.

Shade of purple was for the Christians.

Shade of blue was for the Sikhs.

Shade of brown was for the Hindus.

(1) I started with the open coding process, where each interview was read twice and on the margin of the transcript, hand written notes were added. Each line was analysed and given a meaning. Words or descriptions used in the topic guide were also used as “open code descriptors”.

(2) Open codes were grouped into prescriptive categories. Each prescriptive category was given a number and a ‘category label’, using words which reflected the issues of ideas that the participants said were important to them. I also noted a “meaning of description” so that the differences and similarities could be easily identified and corrected. This was very

useful as I needed to explain to other researchers and supervisors what the participants explained regarding their views and experiences.

(3) All the sentences and data that could have more than one meaning were assigned into “labels”.

(4) All the “labels” that had similar meanings were grouped under an umbrella, “themes”. All the data within each transcript was re-coded with the theme codes. A coding framework was finalised using the themes that were generated.

(5) Finally, the coding framework was developed using the themes generated from step 4. All the data was cut and pasted from the transcripts and mapped against the themes. In this way the coding framework was continuously adjusted if data within the transcript did not reflect the theme description. The framework was only finalised when the transcript did not provide any new themes relevant to the research.

LIMITATIONS OF THE RESEARCH PROCESSES

In qualitative research reliability, neutrality and consistency are very important. People’s feelings and perceptions are dynamic and ever-changing, which could make it very difficult to recreate previous research situations. I would also like to acknowledge that the findings cannot be generalised. Funding was the major issue, as I need to work and generate money to pay through my university. Being an international student, my fees are normally three times those of EU students, and I personally feel that if I could have managed to get funding, the project might have taken a different dimension (and finished sooner).

According to Ary *et al.* (2006), data triangulation is a necessary component of qualitative research, because it enhances and gives credibility to the phenomena under study, as it is being understood from different points of view, like mixed methods (quantitative). I fully recognise that there are numerous deficiencies in the research design, which could have been minimised if different approaches had been used.

The study looked at groups of men who originated from Pakistan, Bangladesh, India and Sri Lanka. I feel that if I could have added the Nepali group (new immigrants), it would have instilled more insights to the data, as two of the groups included just three participants (Jain and Sri Lankan). I personally feel that a few more participants could have added more rich data. Due to the small sample size and recruitment of men only from England, the conclusions and recommendations made cannot be extended to represent the entire South Asian population across the UK.

REFLECTIONS ON THE STUDY

Participants from two groups in Leicester (Gujrathi speaking) were not willing to participate unless they received £20 for their travel expenses for attending a one-hour interview session, as they were paid in the past for research connected with the NHS. They justified their request for money in mercantile terms: “*you will get a PhD and what will we get?*”

Being multilingual has its advantages; I conducted most of the interviews with my own language skills, except for two groups in Leeds (Bangladeshi and Sikh). However, being Asian does not make it any easier to obtain the data from the community. In fact, studies have shown that the participants find it easier to work with white researchers, as they know that whatever is said will neither be questioned nor challenged, as they presume that most of them do not have an in-depth understanding of the South Asian culture and norms.

Six Thinking Hats, an approach recommended by Edward De Bono (1985: 27), was used as I felt I had to constantly change my identity and explain religious beliefs, caste, origins and motives, in conducting the research. I had to change hats according to the situation. Some Gujarati elders assumed I was a Gujarati and spoke to me only in Gujarati, and considered it disrespectful when I failed to speak back to them in their language. On one occasion, I was even asked by the community: “are you ashamed to speak your mother-tongue?” Some thought I looked Bangladeshi due to a dark complexion, while others assumed I was a Sikh, as he wore a *kara* (Sikh bangle). My surname, George, which is not Asian, and on numerous occasions I was frowned upon by the elders of the community for not using my Asian name, as Professor Raj Bhopal pointed out about *Nam Phechan*. Asians are used to having their names either shortened or made easier to pronounce like Sam for Samir, Jaz for Jashpreet, Man for Manpreet, Suk for Sukvinder and Bal for Balwinder. I was often asked: “what is your *Desi* [Indian] name?” South Asian elders do not like to be called by their first name, as it is their custom to address elders respectfully, like using ‘Bhai’, meaning brother, as in Dhiman Bhai, Ahmed Bhai.

When conducting focus groups, there are instances when emotions run high and confidentiality is at risk of being jeopardised. There was one incident when a participant felt emotionally overwhelmed and cried, as he was worried about his daughter getting divorced. In another incident, Sikh participants in Leicester were furious about the *Baheno* Group and unanimously voiced their concern that the organisation was responsible for allegedly instigating their daughters and daughters-in-law to stand up against their parents (the *Baheno* group educated the girls of the migrant community about their rights in Britain, on turning 18). Since most of the participants either knew each other or stayed in the same locality, some of the participants were hesitant to speak about sensitive issues like their children’s marriage, divorce or any other matter about their daughters that could jeopardise

their prospects for a good marriage. The group format may discourage individuals from expressing opinions that are different from the majority, for fear of embarrassment and loss of confidentiality (Krueger, 1988). Some of the participants in the study had different educational backgrounds, and those with superior language and educational skills always voiced their opinions differently. Generally, in a group setting, there are always a few participants who are assertive and dominant, and this can jeopardise the dynamics of the whole group.

Before any focus group session was conducted, around three to four visits were made to group leaders. The first visit was to explain in detail the objectives of the research. The leader would then meet with members of his community and recruit those who are willing to participate in the study, and find out if they had any demands. The second visit was to fix the venue, the date, and the timing for the group session. Third visit was to meet with the group itself and explain to them about the study and its objectives. In spite of several visits and assurances the group session was often rescheduled due to someone's death in the community, festivals, or lack of adequate numbers. On two separate occasions the NHS was given priority for health talks.

I have made every effort to be objective; I have to admit that the analysis of the interview transcripts could have been influenced by my knowledge of the cultural issues, which as well as allowing a deeper appreciation of the subjects may have clouded my objectivity. I had to quickly complete the focus groups in Leeds (Pakistani and Bangladeshi), because the men would only come an hour before lunch and would not be willing to wait any longer once food was served. Since I had used this group previously during my MSc, I knew that I had to make sure that I asked all the questions needed, and encouraged the group's dynamics. I had to probe constantly and try to be as neutral as possible, so that I do not lead

the participants in any manner. I personally feel that because I knew them, there could be a possibility of bias.

I only intervened when no one was speaking. Some of the participants spoke very little in large groups, while some others had much to say. Sometimes, the researcher asked for their opinion directly and encouraged them to speak. In one of the groups in London (B), the team leader was rushing through the group interviews. The researcher had to intervene when some of the participants were not happy that their opinions were not heard, as it was evident from their body language (tone of voice, answering with jests etc). In another group (Z), some participants wanted the researcher's help to confront their employers regarding certain corruption charges. The researcher had to clarify that his role as a researcher was limited to matters of health for the community.

I tried to minimise bias by not having a highly structured group. From the start, the researcher invited around 20 participants, knowing fully that on an average only 50% turn up on any given day. Table 5.2 highlights the variation in the number of participants, the lowest being 3 and the highest, 13. A well-structured group will discuss issues that are important to the researcher, but not necessarily what the participants find significant. The researcher needs to facilitate the discussion and not dominate it, so that multiple voices can speak and respond to each other (Morgan 1997: 244). However, too much control could potentially interfere with the group interaction, while too little control may significantly overlook the important issue at hand (Brown & Ritchie, 1994). It is important to strike a balance and to know when to intervene.

Most participants are comfortable with a handshake as a sign of welcome. Some elders expect their feet to be touched in greeting.ⁱ I was not pleased to do this as I had my own religious beliefs; but I put impartiality as a researcher first.

CONCLUSION

The purpose of this qualitative phenomenological study is to highlight the level of understanding of CHD among South Asian migrant men in the UK. The participants in this study were from Leeds, Leicester and East Ham in London. Data was collected using thirteen focus groups with 83 participants; all the data was coded and categorized, an analysis was done, using thematic analysis, to highlight themes and sub themes, explanation and justification for the research design was described, and finally, trustworthiness and research bias was discussed. In the next chapter, I will discuss, in detail, the results from the thirteen focus groups.

CHAPTER FIVE

RESULTS

Introduction

The total number of focus groups conducted was 13. The participants selected in the study were a representative sample of the population researched. Each group had its unique characteristics represented by a colour code (as discussed in chapter four). Differences in each group were based either on religion, caste or place of migration. The group discussion was conducted in a friendly manner and all the 83 participants expressed their views freely. The focus groups were conducted between April 2005 and December 2006. There were held in different parts of the country in different kinds of location, as highlighted in tables 5.1 and 5.2. Data collection never reached saturation point, but was stopped after the thirteen groups on pragmatic grounds.

The questions asked in the thirteen focus groups were conducted across three regions in England: Leeds (northern), Leicester (Midlands) and Newham (southern).

The questions were:

1. Why do people suffer from or develop heart disease?
2. Why do Asians develop heart disease?
3. What part in developing heart disease is played by smoking, exercise and diet?
4. Any other factors?
5. What difficulties do you find in improving your lifestyle with respect to risk factors?
6. Do you have any difficulties with health services as Asians?

Table 5.1 Focus Groups Conducted

Code	Religion	Study Location	Age	Origin	Caste/Faith	Venue
P	Muslim	Leeds	54	Azad Kashmir	Sunni	Voluntary
G	Muslim	Leicester	58	Kenya	Sunni	Mosque
Z	Sikh	Leicester	61	India	Ramghria	Religious centre
M	Christian	Leicester	36	India/UAE	Catholic	Home
S	Christian	Leicester	35	Sri Lanka	Born Again	Home
R	Sikj	Leeds	60	Kenya	Ramghria	Religious centre
T	Hindu	Newham	35	India	Mudaliyar	Home
B	Sikh	Newham	58	Uganda	Jat	Religious centre
L	Hindu	Leicester	60	Dar-es-salam	Lohana	Hired venue
E	Hindu	Leicester	59	East Africa	Patel/Mochi/Leva	Hired venue
J	Jain	Leicester	41	Kenya	Digambar	Jain temple
I	Muslim	Leeds	59	Sylhet	Bengali	Voluntary org.
C	Muslim	Leeds	63	Kenya	Khatri	Religious centre

The findings are presented under these titles as themes and the associated sub-categories of response, supported by verbatim quotes from each question asked. An anonymised tag identifies each informant briefly; for example, *Mal Chr-1, Indian 37 means Malayalam Christian, participant no 1, Age 37, migrated from India.*

Question One.

Why do people have heart disease?

Emotion
Smoking
Drinking
Food
Hereditary
Lack of exercise

One common response to question one was the interpretation of conventional risk factors as referring to white people. Most of the participants interpreted “people” from the question as non-Asians, and felt that they experienced totally different risk factors. Most of the

participants were aware of the risk of CHD from their local GP, word of mouth, government campaigns, or from voluntary organisations. However, the respondents did not feel that the health promotion messages and campaigns were sending a message to them. As discussed in previous chapters, South Asians are a homogenous group of people with dietary and religious needs that are different than the majority of the population. What might be right for one group can be insufficient for another. One participant observed: “The reason they have campaign for *paan* is only when some white bloke got a rash after eating it, we have been eating it for decades and nobody bothered... Why the sudden change?” Many South Asians feel they are in a separate health group from British citizens of other races.

For the second question, the participants were then asked why they thought that South Asians have a high incidence of heart problems. The responses generated are listed below.

Question Two

Why do Asians have heart problems?

Being depressed	
Lack of interest	
Happiness	
Matter of pride	
Pleasure	
Worry	
Stress	Children Education Facilities Marriage & settle down Motivation Role models Between culture Company/habit Fever worries Pleasure /worries

Table 5.2 Psychosocial Group

	Depressed	Happiness	Lack of Interest	Matter of Pride	Stress	Pleasure	Worry
P			1	2	10	2	1
G			4		9	2	
Z	1			1	7		1
M							
S						1	
R				2	10	2	
T			1		1		
B			1		11	3	
E			1		5		
L					7		1
J			1	1	7	3	
I		1			4		
C			1	4	6	2	
Total	1	1	10	10	77	15	3

Table 5.2 highlights the variation in the understanding between the groups about their understanding of why South Asians have heart problems. Psychosocial factors were the common theme related to question two. The views expressed by Malayalam speaking and Tamil speaking Sri Lankan people did not come under the psychosocial theme.

Being depressed for the Sikh participants was linked to long working hours and the occasional incidence of not finding enough work, which is crucial in paying for their mortgages. One Muslim participant even felt it is better to be happy and smile as life is too short to worry. Most of the participants had a very basic understanding of why South Asians have heart problems. Only when probed deeper by engaging the groups were variations highlighted. The Hindus and the Sikhs shared a similarity in this variable, as both participants felt that “South Asians are born to die of heart-related issues”. Muslim participants’ understanding was more towards diet, as they felt that South Asians only eat fatty food and sleep.

The newer Hindu migrants, they did not think that heart disease was a common health hazard back in India; they believed more people died from animal attacks and poisoning. Another common variable was a lack of interest for all the three religious groups, as the participants either did not want to change their present lifestyle or were nonchalant. Some of the Hindu participants felt that lately there has been a surge in research interest in South Asians, and they could not understand why no research or health advice was undertaken in the past. Some of them have lived in Britain since the 1960s and never experienced so much interest in the South Asian community's health. They did not object to this interest, but wanted some feedback on ways to improve their lifestyle.

The Muslim participants felt that others within the community did not want to change, as they were provided with a lot of facilities free of charge, which was why there is huge wastage. For example, participation in certain physical activity programs is high in the first two sessions, after which the enthusiasm fades. Additionally, many Muslims expressed fatalistic attitudes about their health: "All in God's hands so why bother". Another common variable for the groups was "Matter of Pride" (or in Urdu, *izzat*). The Muslims did not want their wives to work, even if they were in very low paid jobs, whereas Hindu wives tended to work to supplement the household income. Both Sikhs and Muslims did not want to walk anywhere even for a short distance, as a matter of pride - having numerous cars in their driveways, they felt it was shameful to walk. For some Sikh participants, food served on special occasions had to be made with the best ingredients, which in most cases was rich in fat and sugar. Even if they wanted to change, the fear of being taunted by friends and family was a barrier for them from making healthy choices.

Stress caused by kids was a common variable for all the three groups. Muslims and Sikhs emphasised the marriage aspect of things; for example, when their spouses are not happy that affects them. Sikhs feared that their children, especially their daughters, are having

illicit relationships before marriage, which has increased the incidence of divorces, whereas Muslims worry even if their children do not want to get married at an early age, and not keeping up with traditions. Bad company and friendships were common concerns with the Sikh participants, whereas the Muslims felt that their children are taking overdrafts of thousands of pounds to fund their habits in drugs and fast cars. Compared to all the other religious groups, the Sikh participants were the most emotional of all. As mentioned in the chapter four, one participant broke down with the fear of his sibling's marriage not taking place. The fear of being kept in care homes, not disciplining their kids, being persecuted, and families breaking down were all common fears among all groups. For most participants, the reason to immigrate to Western countries was solely for their children, but they feel let down by the very ones they have sacrificed their lives for. Competition was common between most of the older migrants, aiming to prove to relatives and friends that they were better off than others. Sikhs they preferred to show their spending capacity at their children's weddings, wherein there is constant competition on who spends more on venues, saris and the best DJ. Competition for Muslims and Hindus was more about better cars.

Children

<p>Muslim Community</p> <p>“People with family are getting stressed day by day by the children you know family stress I think, I think this is the main cause for problems with the Asian people I am not talking about the English, our Asian people”</p> <p><u>Pak Mus-7, Azad Kash 58</u></p>	<p>Hindu Community</p> <p>“This generation is lucky as they are born here and bred here and they know what is what and what they need to do”</p> <p><u>Guj Jain-3, Kenya 40</u></p>
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Education

<p>Muslim Community</p> <p>“Another reason is that people are willing to work 18 hrs a day, what are you going to earn when you don’t have education £ 4-£5/hr”</p> <p><u>Pak Mus-1, Azad Kash 50</u></p>	<p>Hindu Community</p> <p>“In our times we used to attend universities in our own city so that we could save money and also be in control of our parents and we ended up with less loans, but may be less exposed, that could be the cause of heart disease, we don’t socialize with other races, as compared to this generation, they do mix more freely and come out not only with a degree, but also with a huge loan, its always a burden on us as we worry about them so much”</p> <p><u>Guj Jain-1, Kenya 45</u></p>
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Marriage & settle down

<p>Hindu Community</p> <p>“If a girl says you have to reduce your belly we get inspired, but later it fizzles out again, after all its arranged marriage”</p> <p><u>Tam Mud-4, India 36</u></p> <p>“In our communities the issue of virginity is still an issue now, I know of my friends son who got married and by the next day they are divorced as the girl was not a virgin and that that becomes a joke in the family and girls father died by heart attack”</p> <p><u>Guj Jain-3, Kenya 40</u></p>	<p>Muslim Community</p> <p>“He is not from our same village, so now people are talking about that she got married from outside because she couldn’t get married from someone in the family as we always get married to the cousin”</p> <p><u>Bang Mus-13, Sylheth 65</u></p> <p>“Children get affected and the whole family gets affected mostly when it comes down to inner family, marriage develops problems, then it affects the whole rather than just one or two and this is the major stress problem... unemployment effect and employment of young children and also the kinds of jobs and the financial problems, some are students and they don’t get jobs families are affected and most children with live family children don’t get jobs and parents are reluctant to give them up Then the pressure in one person the father”</p> <p><u>Pak Mus-4, Azad Kash 52</u></p>
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Family link & extended families

<p>Muslim Community</p> <p>“What this gentleman is trying to say that in Asian family structure, because of extended family, main stress comes from the children, which also comes from large families”</p> <p><u>Pak Mus-4, Azad Kash 52</u></p>	<p>Hindu Community</p> <p>“Our kids don’t have any respect for us, they don’t understand how much we have suffered to make them at this level, life wasn’t as easy as it was in the past, these <i>ghoras</i> now talk about equal rights, life in the 70s was hell, Our kids have everything now”</p> <p><u>Guj Mixed-7, East Africa 54</u></p> <p>“We come from Africa and the way we used to respect our parents some how it was registered in us that our children have not been the same as we brought up, its is not their fault and these small things affects a person slowly and the generation gap is also widening”</p> <p><u>Guj Lohana-1, Tanzania 56</u></p>
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Kids/exercise

<p>Hindi Community</p> <p>“Kids they are the main problem, before you tell your kids to do it and they do it”</p> <p><u>Guj Mixed-7, East Africa 58</u></p> <p>I had to walk to school for nearly 3 miles, but my son now has to walk 100 yards, everybody goes by car”</p> <p><u>Guj Jain-2, Kenya 42</u></p>	<p>Muslim Community</p> <p>“In this country there are so many factors which are related to stress... like in this country you can’t do anything to your child with so much child protection, child this and that thing, thing, thing, but back in Kenya... if you spanked your child no one will come to my house and ask why did I spank my child... His teacher will not come to me and ask “Why did my child have a spanking from me on bottoms” here a child has an upper hand you see over their parents”</p> <p><u>Guj Mus-2, Kenya 55</u></p>
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Competition

<p>Hindu Community</p> <p>“I am driving in a mini and my neighbour has a Mercedes, I should be happy having a car, but now I need one like this ”</p> <p><u>Guj Lohana-1, Tanzania 56</u></p> <p>“In olden days you needed just enough to survive, we were not ambitious. All our parents wanted is that the kids go to University and become something in life and now the next generation is thinking they are all white, act white and even eat like white, but you will never be the same, now we all have different needs which are more”</p> <p><u>Guj Jain-3, Kenya 40</u></p>	<p>Muslim Community</p> <p>“God made man, man made money, money made the man mad its in our system we have bigger extended families and all is about competition... if I have a Mercedes today my cousin will work twice to get a Mercedes jealousy also in certain communities”</p> <p><u>Guj Mus-3, Kenya 49</u></p> <p>“Yes its competition... and its among our people competition they are not going to look at all at their health our generation there is lot more problems we are not looking holistically, but narrowly and that’s the problem that’s the major factor”</p> <p><u>Pak Mus-1, Azad Kash-50</u></p>
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Money

Christian Community	Hindu Community	Muslim Community
<p>“Definitely having more money will make us have a better life style”</p> <p><u>Tam Chr-1, Sri Lanka 36</u></p> <p>“Even if we get better jobs and better lifestyle we will still find it difficult our lifestyle (diet)</p> <p><u>Tam Chr-3, Sri Lanka 35</u></p>	<p>“We have to make money, we have more responsibility, these people don’t have any responsibilities”</p> <p><u>Tam Mud-1, India 38</u></p>	<p>“Indians.... They want to make money.... money is main”</p> <p><u>Guj Mus-3, Kenya 49</u></p> <p>“Like you see this generation have been labourers and all what they do is adapt them self to make money unfortunately all think of earning money, They take low paid jobs and have to work 3 times harder than someone who is educated.. Again there is no rest for the body”.</p> <p><u>Pak Mus-4, Azad Kash 52</u></p>

Question Three

What part in developing heart disease is played by smoking, exercise and diet?

Tobacco	Physical Activity	Diet
Misguided	Lack of exercise	Change of diet/ eating more
Other Types	Lack of Facilities	Cooking
Smokeless Tobacco	Indoor	Late eating
Reason to leave/smoking cessation	Gym	Food labelling and health promotion advice
Will power/ no effect	Local trainer/ aerobic instructor	Heavy food/ rich foods
	Cost factor	Oil/ fats
	Swimming	Coconut oil
	Time factor	Sunflower oil
	Forced to do exercise	Butter
		Ghee
		Linseed
		Fish oil
		Meat
		Sea food
		Spice/ taste fact

Table 5.3 Lifestyle

Groups	Diet	Physical Activity	Tobacco
P	2		2
G	3		6
Z	1	5	1
M	18	2	6
S	6	2	
R	5		2
T	9	1	1
B	11	3	
E	8	1	
L	4	9	2
J	8	1	1
I	10	2	4
C	4	2	
Total	89	28	25

Among the three-lifestyle choices the most popular was diet (see table 5.3 and 5.4). Most of the participants were very keen to engage in this topic and were willing to voice their own opinion as to why they think diet plays an important role in the development of coronary heart disease. There was difference between the newer and older Hindu migrants; the newer Hindu migrants prefer eating later at night, whereas the older ones who eat no later than 7 pm. Before moving to the UK from Africa, most of the older migrants ate their main meal at lunchtime and a lighter option at night. However, after moving to the UK, to avoid being picked on at work for eating curry and rice, they began to take sandwiches to work (with which they were not happy), and to eat larger hot meals at home in the evenings. For some, the changes in hot meal timings could be a trigger behind the surge in heart-related incidences (i.e. the shift in hot and cold meals). Some of the participants even lie down and sleep straightaway after a meal. The Christian participants also linked cooking with CHD, believing that the white onions sold in the UK led to more oil consumption (compared to the red onions they were used to).

Most of the participants observed that the local Asian foods do not have food guideline tables, which makes it hard for them to know the fat/saturated fat content in food, compared to supermarkets, whose colour-coded approach is relatively straightforward and transparent. Fish was widely eaten by the Christian and Muslim participants. The new migrants were happy with any fish, whereas the older Muslim migrants preferred fish imported from their home countries. Most of the participants ate meat, except few Hindu and Sikh participants. The new Christian migrants preferred meat to vegetables because of the relative parity of price; meat in their home countries was significantly more expensive than vegetables. There was some confusion over the kinds of meat recommended; some of the Christian migrants preferred eating pork, thinking it was the white meat commonly recommended by health authorities, when in fact this refers to poultry.

The kind of oil used in cooking also varied between groups. The Christians preferred coconut oil for its taste, and did not seem to worry about the saturated fat content. The Punjabi-speaking participants preferred butter and ghee to other cooking oils, as the taste was a very crucial element. For the Muslim participants, any oil except olive oil was the preferred choice. Some participants clearly mentioned that the amount of oil used in their cooking makes it unfeasible to use olive oil, and they also expressed a view that olive oil is only used for massage externally, and not suitable for cooking purposes. Some of the Hindu participants preferred using rapeseed or linseed oil as a substitute for fish oil. For most of the participants, the taste of food was always a priority, but the intensity of using spices varies between groups. Most of the newer migrants eat very hot and spicy food, whereas the older migrants have changed to milder versions over time, and find it extremely hard to cope with spicy food when they are on holidays back home or even at weddings or functions.

Eating sweets was common among all the participants. Even though some of them are diabetic, they still prefer to eat sweets. The kind of sweets varied according to religion. Some of the Hindu and Muslim participants believed that drinking fizzy drinks could be a trigger for CHD. 13/83 participants expressed their views on changes post-migration. Most of the new migrants have made changes after they moved to the UK. The Christians now prefer eating microwave food, as it is quick and less stressful. New Hindus immigrants have changed the way they eat their morning breakfast; in the past it was rice-based dishes, but now they have adapted to more cereals and lighter options. Most of the participants felt that lack of physical activity also played an important role in CHD. 5/83 participants felt that exercise was a key factor. The Hindu, Sikh and Christian participants felt that since buying a car has become affordable, people seldom want to travel on foot. Some of the participants also felt that there was a lack of training facilities; the Hindus preferred having more walking clubs and events for people to spend time to socialize with each other; Muslims preferred to have an Asian-only gym; Sikhs who wanted single-sex gyms and swimming pools

All of the participants would prefer gyms to be free of charges or to have some form of subsidy to pay the £20-35 monthly charge. Time is a crucial factor for most participants in the study. The Christians felt that back home they had time but no facilities, and in Britain they had facilities but no time. The Hindu participants felt that even though their community members have the time, they are not aware of the facilities available. Muslims felt that people would use the facilities if they were free. Some of the Hindu participants also voiced their concern regarding the kind of exercise not tailored for the Asian community, especially when there is a young instructor; they find it hard to take instructions from younger people. They also wanted their ladies to do different sets of exercise, as some might find it difficult to train with their sari on. They also do not like the rhythm of songs

chosen by the younger instructors, because there is more emphasis on movement of the hands and legs and in some ways they are compelled to dance to Western beats. They would prefer alternative exercise sessions catered for the Asian participants. Usage of tobacco and other tobacco-related products had mixed levels of understanding among the participants. Most of the Sikh participants did not smoke. The Muslims preferred either cigarettes or chewing tobacco. Hindus preferred chewing tobacco with *paan*, whereas most Christians stopped smoking after moving to the UK because of the cost or pressure from their spouses. Some of the participants were occasional users, especially during festive and marriage seasons. Table 5.3 highlights the difference between the groups and individual participants. There was also one Muslim participant who never thought eating pan was bad because it was a green leaf and also helped as a mouth freshener, and he knew relatives who had been using these products for many years and living healthy lives. Some even justified the use of cigarettes by research supposedly published in American universities, and finally there were both Sikh and Muslim participants who felt that smoking only affects the lungs and not the heart, so there is a no link between CHD and smoking.

Diet

Christian Community	Hindu Community
<p>“You don’t need to cook here and all instant, you can get ready made”</p> <p><u>Mal Chr-2, India 35</u></p> <p>“You get ready to cook with ready cook meat, so when you come in evenings you have no time and even use the microwave”</p> <p><u>Mal Chr-1, India 37</u></p>	<p>“I like Indian food only, but after coming here I have to compromise in such a way, more into ready made foods</p> <p><u>Tam Mud-5, India 39</u></p> <p>“I am sure other communities are going forward with the fresh food and fresh juice options, what we have a problem in us Asians is that we take the cheaper options”</p> <p><u>Guj Jain-1, Kenya 45</u></p>

Late/ eating

<p>Hindu Community</p> <p>“We wont eat anything the whole day and may be just eating a sandwich and tea/coffee and when you come home and you are so hungry you eat loads”</p> <p><u>Guj Mix-1, East Africa-62</u></p> <p>“They ask us to walk more and reduce the food in the night, like no heavy food, we cant just eat fruits in the night, we don’t have will power”</p> <p><u>Tam Mud-6, India 39</u></p>	<p>Muslim Community</p> <p>“When I came home I had a big meal and what it is that after eating I straight away went for a shower, I had a coke which I think triggered with the big meal”</p> <p><u>Pak Mus-3, Azad Kash 36</u></p>	<p>Sikh Community</p> <p>“All those people are like me, we can’t leave the habit now, nobody can leave their habit like the main eating”</p> <p><u>Sikh Jat-4, Uganda 59</u></p> <p>“The food is not properly digested, that is the main reason we eat heavy always, you need to eat fruit first like melon to clean your system and then eat carb food, you need soft food then hard food but we eat hard food first and then fruit so how will they compress, it is like a traffic jam there, all block and that makes the heart bad”</p> <p><u>Sikh Kath-2, Kenya 65</u></p>
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Cooking

<p>Christian Community</p> <p>“Nowadays we use 1kg almost for each dish”. “For example we make chicken curry; we make masala in oil, so the onions we cut and put in the oil, the onions suck too much oil”</p> <p><u>Mal Chr-1, India 37</u></p>	<p>Sikh Community</p> <p>“Everyone eats the same food in the world, but the way that you cook”</p> <p><u>Sikh Kath-3, Kenya 55</u></p>	<p>Hindu Community</p> <p>“Asian people die from heart attacks because of how they cook the food</p> <p><u>Tam Mud-7, India 36</u></p> <p>The most things that we suffer is the method of cooking... like <i>parothas</i> can be cooked dry or cooked dripping in butter.... So it depends on the food on how you make it also none is bad for you and the standard, meal is a mixed with that, lunch is light like some sandwiches and our Asian food is heavy</p> <p><u>Guj Jain-2, Kenya 42</u></p>
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Food Labelling & Health Promotion Advice

<p>Christian Community</p> <p>“Medium type in any way. If the level says 110% less cholesterol free... I don’t believe that, I always go for the normal range, I personally believe on that based on my condition”</p> <p><u>Mal Chr-1, India 37</u></p>	<p>Hindu Community</p> <p>“We don’t know the difference between sunflower oil and olive oil, ground nut oil or even vegetable oil, when my mother came to know the difference she was 50, then she said, ‘Oh this oil is good for health’, my mother is not educated and so that could be an issue”</p> <p><u>Tam Mud-1, India 38</u></p>
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Olive Oil

<p>Christian Community</p> <p>“It doesn’t go with our food”_</p> <p><u>Mal Chr-1, India 37</u></p>	<p>Hindu Community</p> <p>“Its not very tasty, we are not used to it”</p> <p><u>Guj Mixed-7, East Africa 58</u></p>	<p>Muslim Community</p> <p>“The quantity we use is not possible, you get five litres of olive for 15-20 pound, you can get 25l of vegetable oil for £7.50 and we use such a large quantity and when you bring the small bottles and you pour half of it in one curry, we need oil and we are cooking always”</p> <p><u>Bang Mus-6, Syleth 59</u></p> <p>“We use olive oil for body massage, it gives better colour for the skin and the skin is soft for dry skin and all those things, it makes the babies and girls fairer”</p> <p><u>Bang Mus-7, Syleth 62</u></p>
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Butter

<p>Muslim Community</p> <p>“You know we have <i>sag</i> [spinach] and tell me when it is made with butter etc. and when well done, you can’t resist it... I don’t think there is a difference with olive oil/margarine... but with butter the taste is different and more fun”</p> <p><u>Guj Mus-6, Kenya 58</u></p>	<p>Sikh Community</p> <p>“But we like grease, until the dhal is with butter or when the rotes are with butter then only I can eat food, without that I get no taste, it is my habit, but what I do is drink hot water with my food so that the grease is clean quickly, like the pipes in winter, when there is cold it becomes hard same I try and melt the grease so that my system is clean, when ever I drink water it is hot as it helps you see, it is hot water not Luke warn there is a difference in that also”</p> <p><u>Sikh Khatri-3, Kenya 65</u></p> <p>“They say don’t eat grease, but without grease how can you run smooth, you need good butter to make body run like a good car”</p> <p><u>Sikh Kathri-4, Kenya 64</u></p> <p>“Butter is vegetarian, purely vegetarian and that is good for you”</p> <p><u>Sikh Ram-4, Kenya 58</u></p> <p>“So much butter depending on body structure, if anybody can burn it that’s good, without any exercise, people eat and eat and there are some who cant get fat, everyone is different and everyone is different medicines illnesses are different, cure everything is okay if you eat within your limit”</p> <p><u>Sikh Ram-6, Kenya 52</u></p>
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Meat

<p>Christian Community</p> <p>“They say in white meat there is less fat, pork has less fat and mutton more, lamb okay, mutton more fat”</p> <p><u>Tam Chr-3, Sri Lanka 35</u></p>	<p>“If you eat too much mutton (meat) or whatever”</p> <p><u>Tam Mud-4, India 36</u></p> <p>Muslim Community</p>	<p>“To be honest I eat more red meat that I am supposed to, we have red meat every single day”</p> <p><u>Bang Mus-1, Syleth M 62</u></p>
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Physical Activity

Lack of Exercise

<p>Christian Community</p> <p>“All we do is travel by car and not move; just sit”</p> <p><u>Tam Chr-2, Sri Lanka 35</u></p>	<p>Hindu Community</p> <p>“I had to walk to school for nearly three miles, but my son now has to walk 100 yards, everybody goes by car”</p> <p><u>Guj Jain-2, Kenya 42</u></p>	<p>Sikh Community</p> <p>“There is no exercise and only 1% of the people doing exercise”</p> <p><u>Sikh Jat-8, Uganda 61</u></p>
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Gym

<p><u>Muslim Community</u></p> <p>“We doesn’t place for Asian people, every where it is for English people, I will go when there is special Asian gym, or may be tai chi, exercise with our dress is difficult “</p> <p><u>Bang Mus-8, Syleth 64</u></p>	<p><u>Sikh Community</u></p> <p>“Why should we do it, he cant go, he cant go... we don’t have separate gyms for us, even though we have cut our hair we have to have privacy, and sometimes there is mixed gym, we need separate trainers for male and female in timings also”</p> <p><u>Sikh Kathri-1, Kenya 64</u></p>
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Swimming

<p>Hindu Community</p> <p>“Look at our ladies, even they feel ashamed or even shy to wear swimming costume, look at the <i>ghori</i>, they wear so short and they don’t shy because they don’t really bother what someone says, there are so many old women who wont undress in front of young girls, its embarrassing for them, especially for their stomach coming out and there things stopping us because we are obese and could this be a set back?”</p> <p><u>Sikh Loh-4, Tanzania 62</u></p>	<p>Sikh Community</p> <p>“I think we cant does exercise freely, like the white people we need separate swimming pools because people are very shy and if there was separate facilities then we will surely go you see”</p> <p><u>Sikh Jat-3, Uganda 60</u></p> <p>“This gentleman mentioned about going to the swimming pool with turban, they have difficulty, but some cut their hair in the name of blaming religion”</p> <p><u>Sikh Jat, Uganda 61</u></p>
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Misinformed

<p>Muslim Community</p> <p>“If we exercise everyday then you can smoke and do anything”</p> <p><u>Pak Mus-11, Azad Kash 61</u></p> <p>“Smoking is the main cause of heart disease, I don’t think its right my relatives you know is 95 and heavy smokers and still alive you know, he is smoking all through his life”</p> <p><u>Pak Mus-8, Azad Kash-44</u></p> <p>“It can affect the lungs but not the heart... I have been smoking since 1951. I used to smoke from my elder brother by robbing from him, used to smoke beedi and also gold flake and in those days it was an expensive brand”</p> <p>“No... In American one famous university has said that they wont have heart problems and that’s true if he doesn’t do exercise but not cigs ... cigs in-fact burns the fat and finishes the fat and in that way doesn’t affect the heart”</p> <p><u>Guj Mus-4, Kenya 62</u></p>	<p>Sikh Community</p> <p>“There is no problems in smoking because only affects the lungs”</p> <p><u>Sikh Ram-6, Kenya 52</u></p> <p>“May be, probably youngsters nowadays. I can tell you of my experience and time, it was not popular”</p> <p><u>Sikh Ram-2, Kenya 64</u></p>	<p>R2, FG-6, Pg-4, M-64</p> <p>Hindu Community</p> <p>“My father is 82, looking at him you will never say he is 82, he has been smoking for 72 years”</p> <p>Guj Loh-1, Tanzania-8</p>
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<p>“It’s not that.... It could be one of the factors but not like everyone says... “Smoke and heart.... Everyone will die”.... definitely not, I have seen people who have not smoked in their lives, but they still have heart disease”</p> <p><u>Guj Mus-2, Kenya 55</u></p>		
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Reason to Leave/ Cessation

<p>Christian Community</p> <p>“We could buy just one cigarette and not like in the UK you have to buy the whole pack. Cost of £5, very costly, .I don’t believe it here, out side one pack £5, in duty free whole block £10, that’s why everyone gets from abroad”</p> <p><u>Mal Chr-2, India 35</u></p> <p>“I stopped because I didn’t like the smell; not good for the body, immediately after smoke I feel exhausted and tired so I gave it up, definitely not price factor I stopped from India, not after coming from here”</p> <p><u>Mal Chr-1, India 37</u></p>	<p>Muslim Community</p> <p>“I went to hospital and they gave me Nicorette gum and they have given me for two years, you have it for long time, when I not get gum for me bad”</p> <p><u>Bang Mus-7, Syleth 62</u></p>	<p>Hindu Community</p> <p>“I stopped just after marriage, my wife asked me to stop so I stopped”</p> <p><u>Tam Mud-1, India 38</u></p>
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Table 5.4 Diet

	Changes in diet	Cooking	Late Night	Food Labelling	Rich Food	Meat	Sea Food	Taste	Veg
P	2								
G	2				1				
Z	1								
M	4	3		2	4		2	3	
S					2	1	1	2	
R					5				
T	2	1	2	1		1		2	
B	3				5			1	2
E	2	1		1	2			2	
L	1		1		2				
J	2	1	1		1			2	
I					2	1	5	1	1
C	1				3				
T ot al	20	6	4	4	27	3	8	13	3

Table 5.5 Physical Activity

5.3b	Lack of Exercise	Lack of facilities	Cost Factor	Time Factor	.Forced exercise
P					
G					
Z	2	3			
M			2		
S	1		1		
R					
T			1		
B	1	2			
E					1
L		5	1		3
J	1				
I		1	1	1	
C		2			
Total	5	13	5	1	4

Table 5.6 Tobacco

5g	Cigarettes	Misguided	Others	Smokeless Tobacco	Smoking Cessation	Awareness
P		1	1			
G		1		2		3
Z		1				
M					6	
S						
R		2				
T					1	
B						
E						
L		1				1
J						1
I	x			2	1	1
C						
Total		6	1	4	8	6

Tables 5.4--5.6 highlight the variation in the understanding between the groups about the roles played by diet, physical activity and smoking on CHD.

Question Four Any other factors?

Age	
Blood pressure	
Climate Season/Environmental Change/Effect	
Diabetic	
Drinking	
Benefits Alcohol	Guidance/ Role Model Quality/ Quantity Weight Gain (alcohol) Eating More (alcohol)
Employment	Perspiration Work Long Hours
Gene/ Genetics	Hereditary
Marriage	
Location & Living Conditions	
Racism	
Snoring	
Technology	Appliances
Media	Will power

Table 5.7 Any other factors that could affect?

	Age	Drinking	BP	Diabetic
P				
G				
Z				
M	2	9	2	
S		3		
R				1
T			2	2
B		2		
E	1			
L			2	
J				
I				1
C				2
Total	3	14	6	6

Age

<p>Christian Community</p> <p>M2 who is also a new Catholic Christian immigrant knows friends and family who suffer from heart related disease below the normal threshold.</p> <p>”One of my good friends had a heart attack he is my same age”</p> <p><u>Mal Cat-2, 35, Indian</u></p>	<p>“Hindu Community</p> <p>Heart attacks are usually from older people aged 65-80</p> <p><u>Guj Mix-3, 61, East Africa</u></p> <p>“Before 65 I have not heard anyone having heart problems, its like playing cards you see, when it is new its nice and when it gets old no one wants the cards, same way elderly people get worn out from the age of 65, the skin becomes wrinkled, your blood is not pure, you get cuts here and there, when men become older they get worn out by nature.”</p> <p><u>Guj Mix-3, 61, East Africa</u></p>
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Seasonal change

<p>Hindu Community</p> <p>“At the movement you have cold and then you have shorter days and then the season changes, your body cant adjust to all this and you have artificial heating, here there is no natural light and also heating like the African and Indian countries”</p> <p><u>Jain Hind-3, Kenya 40</u></p> <p>“I might be wrong here but most of the heart attacks happens just a month after winter, that’s my estimate as I have heard it often that he died, they died from heart attack... its because it gets dark and it affects every human being, because you are always indoor and outside it snows and you cant do anything about it”</p> <p><u>Guj Loh-4, Tanzania 62</u></p>	<p>Muslim Community</p> <p>“But there they can walk for 6 miles without breathing to see friends and families ...its very cold and they can’t go out and that’s why it’s made problem and other”</p> <p><u>Pak Mus-11, Kashmir 61</u></p> <p>“No sunlight, when it rains you will see that people get heart problems, you will never hear that someone in a nice day has heart problems, it’s the weather when it rains the heart will tell you”</p> <p><u>Bang Mus-4, Syleth 61</u></p> <p>“The day is short some time in winter; the day becomes shorter thereby you try to finish all your work in short time and that is stress also”</p> <p><u>Guj Mus-2, Kenya 55</u></p>	<p>Sikh Community</p> <p>“We are from Africa so we need sunshine for our pigments and here there is less sunshine and that is affecting our body and heart”</p> <p><u>Sikh Kat-3, Kenya 65</u></p> <p>“We are brown we need more sun light, right, our skin pigments mush have sun light, our food is always the same unless they are seasoned”</p> <p><u>Sikh Kat-4, Kenya 64</u></p>
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Diabetes

Hindu Community	Sikh Community	Muslim Community
<p>“Due to diabetics amputation of leg or something, awareness among people is less, here amputation due to diabetic of hands or legs is very less, because when they have diabetic they are very cautious because they are aware that diabetic might kill them and heart disease, they are very particular in diet and go for exercise, among Asian even if they have diabetics they just leave it to God and not bothered, well even awareness is less among people is less”</p> <p><u>Tam Mud-4, 35, India</u></p> <p>“We have more issues in diabetics, but not heart problems, we like the assets and the <i>mithias</i> (sweets), unfortunately our habits are from India, we bought a lot of habits here, its fine in a hot country, these sweets are difficult to digest in cold climates, and we use so much ghee” <u>Guj Jain-3, Kenya 40</u></p>	<p>“I am getting old now, I hardly do any exercise and you put on weight, putting on weight leads you to diabetics and diabetics leads to heart attack”</p> <p><u>Sikh Ram-2, Kenya 62</u></p>	<p>“Very different for everyone, some like to eat more sweets”</p> <p><u>Bang Mus-8, 64, Sloth</u></p>

Alcohol

Christian Community	Sikh Community
<p>“Once or twice a week and also in limited quantity because it burns the energy and burns the fat”</p> <p><u>Mal Chr-1, UAE 35</u></p> <p>“Like people in England when they drink they know how to go about like one pint in 45 minutes, not like us, we drink at least five in that time”</p> <p><u>Mal Chr-5, India35</u></p> <p>“We want effect very fast and this is the way we are taught how to drink”</p> <p><u>Mal Chr-2, UAE 35</u></p> <p>“Drinking without any control moderate drinking will not cause as much as regular and I think put on weight”</p> <p><u>Mal Chr-2, UAE 35</u></p>	<p>“We are not allowed eating meat, everyone is different in this country you have freedom, when you drink alcohol you need to eat”</p> <p><u>Sikh Jat-5, Uganda 65.</u></p>

<p>“Normally we are not systematic, when we go for party, how much we drink depends on the crowd, sometimes there are lot of army and navy people”</p> <p><u>Mal Chr-3, UAE 36</u></p> <p>“I think we could control smoking and drink better drinks”</p> <p><u>Tam Chr-1, Sri Lanka 36</u></p>	
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Employment

Work

Christian Community	Sikh Community	Hindu Community	Muslim Community
<p>“Sometimes there is a lot of tension as sometimes there is only work for three to four days or weekend; but not on regular basis”.</p> <p><u>Tam Chr-3, SriLanka 35</u></p>	<p>“You work hard and sweat and that helps you to digest”</p> <p><u>Sikh Ram-2, Kenya 64</u></p> <p>“When I was young, you work hard and it was possible to digest everything.”</p> <p><u>Sikh Ram-2 , Kenya - 64</u></p>	<p>“For Asians they should be satisfied that 40hr/w is enough”</p> <p><u>Tam Mud-1, India 38</u></p> <p>“I don’t need three mobiles, I have taken so many, for that I have to work eleven-hour shifts.”</p> <p><u>Tam Mud-1, India 38</u></p>	<p>“It’s the hard job which is making me to suffer.”</p> <p><u>Bang Mus-2, Syleth 62</u></p> <p>“Before it was in getting work, I used to work long hours morning 5-1400 in the morning and then back at 17-2200 in the evening, its was more like this always as there was over time and this could be the issue, I work long hours and I sometimes do think that I have a heavy heart, may be I need to work less, but then the mortgage.”</p> <p><u>Bang Mus-8, Syleth 64</u></p>

Hereditary

<p>Christian Community</p> <p>“I think it is hereditary when you are in the same house you have the same food and could be hereditary food problem right could be type of food, because they live in the same house and same diet if one gets other should gets also.”</p> <p><u>Mal Chr-3, UAE 36</u></p>	<p>Sikh Community</p> <p>“For me it’s in the family you see.... My father also suffered from heart problems you see.”</p> <p><u>Sikh Ram-3, India 63</u></p> <p>“It runs in the family, its difficult to stop.”</p> <p><u>Sikh Loh-1, Tanzania-56</u></p> <p>“All this talk about the gene from your parents, we have heard quite a lot recently in the media” “Could be, my opinion because that’s why the doctors all ask if you have anyone in the family who has problems.”</p> <p><u>Sikh Ram-2, Kenya 64</u></p>	<p>Hindu Community</p> <p>“According to my view, one of the main reasons for heart problems is genetic reasons, hereditary reasons.”</p> <p><u>Tam Mud-5, India 39</u></p>
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Location

<p>Christian Community</p> <p>“Life here is like a machine and that’s the difference.”</p> <p><u>Tam Chr-3, Sri lanka 35</u></p>	<p>Muslim Community</p> <p>“We are big family and we have to adjust in small houses, yeah there environment is going to be a bit more closed with bit height, the free space and they don’t have that privacy and the ability to move on their own and you share your space with several other people. Obviously you don’t have that flexibility, that room space for regular exercises, the areas where you live, the condition where you live, the condition of the area, make the difference.”</p> <p><u>Bang Mus-5, Syleth 58</u></p>	<p>Hindu Community</p> <p>“Nowadays we have to work hard to pay bigger mortgages because previously we used to want to live together and all family in one street and nowadays as you get more educated and following modern ways, we want to move away from the city.”</p> <p><u>Guj Jain-1, Kenya 45</u></p> <p>“Only people in town have heart attacks.”</p> <p><u>Tam Hind-6, India 40</u></p>
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Racism

<p>Christian Community</p> <p>“These Indians and Pakistani always first thing they ask me, where you from and what is your religion? When they hear Christian they act different.... They can’t believe that we are there in India.”</p> <p><u>Mal Chr-5, UAE 35</u></p> <p>“For them everyone is Paki.”</p> <p><u>Mal Chr-1, India 37</u></p> <p>“You know my team leader is a white guy who is over six-foot tall and he hates people who are racist so when we go to club and if any one says something to me he will always be there to stand for us he hates racism and he always says, ‘We all are human after all’”</p> <p><u>Mal Chr-3, UAE 36</u></p>	<p>Hindu Community</p> <p>“I had only English friends, even though you are with them you are always drawn by your kind, even though I was there, they always used to joke about Asians and then they apologise by saying ‘Sorry mate, you are not like that’, growing up always made you feel that you are different and all the world issues are your problem.”</p> <p><u>Guj Jain-3, Kenya 40</u></p>	<p>Sikh Community</p> <p>“This <i>goras</i> believe in divide and rule policy, so you see, but in Indians the Aryans believe in expanding, they used to call us your Asian Bastards... and Niggers.... And now all that sweet talk, you go anyone in centre city it was difficult, we are shaven but still the colour of our skin is brown and they used to tease us and that is racism, that used to affect us and always we get pain.”</p> <p><u>Sikh Kat-1, Kenya 60</u></p> <p>“I never knew what is colour person is one day in job they told someone my manager that I am sending some colour person, I just cant believe it and after that I do appreciate how much our black brothers have been through, outside they will say ‘love’, ‘mate’ and when you see then in the outside work they look as if they don’t know or feel embarrassed to know an Asian fellow. In Africa I didn’t know what is white, black or brown and here I have to face it always this divide and rule policy.”</p> <p><u>Sikh Kat-3, Kenya 65</u></p>
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Technology

<p>Hindu Community</p> <p>“Just to give you an example of back in Uganda when we were growing up there was no television and you used to get involved with something else, even though there was radio, but it was restricted and so we were getting involved more with helping out in the family, we used to spend time like meeting people more, going out as a family unit, there was more of the family mixing and all the extended family bit, I still remember we used to enjoy going out and meeting new people, calling people home to show our culinary skills and that’s were all the alliance are made or broken and marriages as well, nowadays it’s the click of the button like you have the shaadi.com.”</p> <p><u>Guj Jain-3, Kenya 40</u></p>	<p>Muslim Community</p> <p>“If you put your feet too long by the heater, you start getting dry skin, blisters you start scratching sometimes you see it will develop from one thing to another one start itching from rash and you go to doctor and he will say it could be skin cancer.... It could also be a bit of radiation that knows.... I don’t know... It could be.”</p> <p><u>Guj Mus-2, Kenya 55</u></p>
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Effect on Media

<p>Christian Community</p> <p>“I meant people use margarine you know they show on T.V Flora, London Marathon, its good that why people use it and it controls fat in heart.”</p> <p><u>Tam Chr-3, Sri Lanka 35</u></p>	<p>Sikh Community</p> <p>“I think this new program, Punjabi program which is good for yoga will help for all ailments, I think it is good they have show it so many times.”</p> <p><u>Sikh Khat-3, Kenya 65</u></p>
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3/83 participants felt that age plays an important role in the development of CHD. Most of the Christian participants felt that age does play an important role. The average age of the participants in this research study was 44, but they knew friends and family who suffered as young as 35. Hindus believed that only those above the age of 65 suffer from heart-related illnesses. Most of the Christian participants drank alcohol, along with a few Sikhs. They drank because they said their doctors advised them that it is good for the heart, and ‘burns fat’. Some mentioned the lack of “role models” or tutors, someone who could guide them in drinking the right quantity and speed in completing a drink. Some preferred beer while

others choose drinks according to their exotic status (Bloody Mary). Putting on weight was also a concern in drinking; for some it was believed to be caused by drinking beer, for others it was by rum. The usual practise with most new migrants is eating snacks with a drink, while one participant preferred to drink more by not eating. Both the Hindu and Christian participants linked excess amounts of salt with blood pressure, yet even though salt is already added during the cooking process, they still felt that they had to add a pinch of salt to get the optimum taste at the table. Some of the older migrants felt that changes in weather, increase in pollution and the effect of sunlight all had an impact on CHD. For the Hindu and Muslim participants there is a link between length of the day in winter and the difficulties in trying to finish work earlier; for others it was difficult for the body to adjust to artificial heating (heaters). For the Sikh participants, the major worry was the lack of natural sunlight that they felt could be a cause of CHD. Some of the new migrants were very keen to make changes in their lifestyle when they came to know about the dangers of being diabetic as compared to the older migrants who were not willing to make compromises.

There was also the belief that adulterated food could have an impact on CHD between the Hindu participants, for the new migrants, experiences of oil being tampered with still remains fresh in their minds from back home. In the past few years stringent checks in the UK on food quality have made the spices much purer and of the highest standards. For some participants this is a worry, as they were used to the mala-vats (mixed forms and not the pure form of spices). For the Muslim participants, the fear of adulterated *bedis* (tobacco rolled in leaves and smoked) and malpractice at *halal* shops were concerns.

For the Muslim and Hindu participants the intensity of work was the key factor for CHD, whereas Christians were more worried about finding work daily. The Sikhs believed that they did not perspire as much as they did back in India and Africa, and believed that to be a cause of CHD. Most non-Muslim participants believed that there is a link between

hereditary and CHD. The Christians' understanding is that if anyone in the family is suffering from CHD-related illnesses, the others are also vulnerable because they eat the same food and live under one roof. The Hindus believe that because it runs in the family it is difficult to stop it from progressing, and the Sikhs' understanding (basically from the media) is that if a parent gets CHD, the offspring will get it. They are confident about this because the doctors always ask if any family member suffers from heart-related diseases. Among the Sikhs, the Jats believed that just like other things people inherit from their parents, this is also inherited.

Some Hindu participants believe that people in towns are more affected these in the urban setting. The Muslims believe that living in small and cramped houses could be a cause, as they have bigger families than others. Some of the Christians participants talked about racism, but felt there was no connection between racism and heart disease, but giving more weight to stress. Both the Hindu and Sikh participants believed that there was a link between snoring and heart disease. Some of the participants also linked appliances with CHD, namely TV and PS2 games, whereas Muslims felt that using the heater to warm the room dries the skin, which causes blisters and leads to CHD. For some participants the information provided by the media on healthy lifestyles was very informative. The Christians were very well aware of the trends and changes with the help of the media. Some of the new migrants felt that they lacked a strong will power to change their habits, in spite of knowing all the risk involved with CHD. A few Sikh participants liked drinking hot water with meals, so that all the fat could be melted down, whereas Hindus prefer to be active and do exercise, even in the rain.

Question Five **What ways can you improve your lifestyle?**

GOVERNMENT ROLES	OTHER COMMUNITIES	FAITH RELATED ISSUES
Laws Facilities/ Lack of Training Interference	Compared with the White / Local Community Eating Habit Educational Campaign Family & Kids Social Life Quality of Life Wages & Employment Compared to Punjabis	Caste/ Same Type Place of Worship Mosque Gurudwara Temple Church Role Played by the Community Centre Religious Principles/Religious Reasons Type of Food (Halal/Non-Halal) Type of Drink Smoking Smoking Allowed Not Allowed

Table 5.8 White Community

	Eating Habits	Education Campaigns	Family and Kids	Social Life	Quality of Life	Wages & Employment
P	2			1		
G		1	3	1	1	
Z	1	1	1	1		
M	1					
S	1					3
R			2	1	2	
T			5	1	7	
B						
E		2	3			
L	1		4			
J		1	2	2	3	
I	2					
C	1		3	2	4	1
Total	9	5	23	9	17	4

Table 5.9 Religion

	Caste	Place of Worship	Community Centre	Holy Literature	Type of Drink	Society	Smoking
P			1				
G				1			
Z	1	1	1				
M		3				1	
S							
R			1	1			1
T							
B		1	2		5		2
E				7			
L		1		6		1	
J	1			3			
I		5		1			
C		1	3				
Total	2	12	8	19	5	2	3

Tables 5.3 to 5.9 supports question number five on highlighting the issues faced by different South Asian groups in improving their lifestyles.

Most of the Muslim participants felt targeted by the government since 9/11 (2001). Bangladeshi participants in particular felt that visa restrictions have been making life difficult for them in reuniting their families still stranded back home, and there was a special mention of the level of the English requirement which did not exist previously. Most of them lost their jobs because of the closure of manufacturing industries across the UK, and were never helped in retraining compared to their white colleagues who were offered facilities and opportunities to retrain. Most of the Muslim participants are smokers and they blame the government because they felt that they were promoted in the army and workplaces in the past, but now face many restrictions. Some felt that even though they have heard about olive oil and its goodness, it is of no use to them unless prices are reduced. The Sikh participants also viewed government involvement with some suspicion, finding it hard to understand why South Asians have been bombarded with research in the last few years; they

strongly felt that if the government genuinely wanted to help, they needed to do more on the imported foods which have no standard food labelling, compared to conventional Western foodstuffs. Sikh participants felt the “Gujrati” speaking community are after their daughters with the help of the Baheno Group and local radio stations; they make vulnerable girls aware of the rights in this country. This loss of control is affecting the Sikh participants to a great extent.

Most of the participants felt that the white community lived a better and more relaxed life by taking more holidays, worrying less about themselves, having a better sex life, having kids with multiple partners, eating organic food, downsizing their homes and travelling the world. For some it was envy; others felt that white people always get the best pick. For the Hindu participants, Asian cooking is much healthier than McDonald’s, which they feel is frequented more often by the white community. Muslims feel that there is a lot of bad press on Asian cooking, while the white community eat pork, which has a high amount of saturated fat. According to them, the white community has less chance of being affected by CHD because they cook fewer dishes and eat their food raw (fish and beef). Christians in contrast felt that the different kind of onions used could be the key.

Most of the older migrants felt that the white community has lesser worries because they do not worry about their daughter’s future, as most kids are asked to leave after the age of 16 onwards, for them this is unheard of in the Asian community. If white men’s wives come home late it is never an issue. Muslim participants felt that the prohibition of intoxicants in Islam prevented them from drowning their sorrows like whites.

Psychosocial factors were the major concern for most of the older migrants, and for the newer migrants, a concern was religion, and the stress of not being taken seriously. The lack of places to practise their faith was the biggest concern. The Muslim community, especially the Bangladeshi participants, voiced their concerns regarding the lack of places of worship in their language (*Sylethi*), and felt it a prestige issue because the Pakistanis had more mosques than them. Religion also played an important role for the Hindus too, who were much more superstitious about things like cats crossing, or someone cursing them. They also believed in myths

around the gravitational effect on the heart and the mirror effect on scenarios across the globe at the very same time.

Government

Muslim Community	Sikh Community
<p>“We are Muslims there are so many worries when you worry for something for good or for bad it effect your heart... leave religion aside after 7 July all problems you see... Worries.”</p> <p><u>Pak Mus-9, Azad Kash 62</u></p> <p>“Yes, worries and too many anxiety problems, like too many family members in Bangladesh and this new government they want to make difficult for us, they don’t like religion... they make tough for English.... Ask English people to pass English in 7.5, I tell you they might also fail, I don’t want to study English, my family only want to come to Britain.”</p> <p><u>Bang Mus-8, Syleth 64</u></p> <p>“They forced all Asians to retire, they are all manual labour, they gave other white people money to learn, but when they went there was no money or skills so there was no training, the industry died, we used to work and by mid-eighties all week.”</p> <p><u>Bang Mus-1, Syleth 61</u></p>	<p>“Food is the same and the government is mentioning that the grease is more in our food, why they are finding out now, no one asked earlier; curry is the food of Britain and not fish and chips you know.”</p> <p><u>Sikh Kath-2, Kenya 60</u></p> <p>“Ghee is suited in hot countries; I feel government needs to label all Asian food and make strict code on fat/saturated fat.”</p> <p><u>Sikh Kath-1, Kenya 60</u></p> <p>“Don’t get me wrong, they have for all the food green signal type of advice but why don’t they have this for Asian food, have you see the food which comes from the India, the same tin with a sticker about the food, its like Lidl all German food is with one small label in English as they don’t bother to repack, but why is everyone so worried about now, is it because they care for us or they are worried that we are costing them more to care for us, they need not worry about us but of the new Polish.”</p> <p><u>Sikh Kath-1, Kenya 59</u></p>

Interference & involvement

Muslim Community	Sikh Community
<p>“I don’t understand that there wasn’t much evidence before they wanted to promote cig... you see everywhere the Post Office everywhere there are adds everywhere... there were some in the army and getting three packets a day... ask that gentleman...ask him... do you get free cigs?”</p> <p><u>Pak Mus-6 Azad Kash 63</u></p> <p>“I think it is stress, it is very strong as Dr says that smoking is biggest killer, if you go back 40-50 years during world war, government was promoting cig...to the army giving people free.... it was the govt and now govt is saying different.”</p> <p><u>Pak Mus-11, Azad Kash 61</u></p> <p>“If the government wants why not make it cheaper, they say and want us to buy olive, it is</p>	<p>“Maybe, but you see when I was in the hospital for minor check up, I was the only Asian in the wards or even two wards you can say... if they say we have the highest problems, I am sure that there should be more people, where are there gone, this is just a political stunt to show that we care for you now, its all the election propaganda, why didn’t they come earlier and say.... even we are humans you know.”</p> <p><u>Sikh Kathri-1, Kenya 60</u></p> <p>“Diet problem is not started today, over twenty years now, that time we didn’t have time, were busy with work, no one bothered about us, how come the <i>ghoras</i> are worries now, <i>dhal mein kuch khal</i>, I know them for long.</p>

very expensive for cooking purposes.” <u>Bang Mus-12, Syleth 60</u>	<u>Sikh Jat, Ugdnda 65</u>
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Other Communities

Compared with the white /local community

<p>Hindu Community</p> <p>“Asian people, especially Hindus, their culture are different, Europeans are different.”</p> <p><u>Guj Mixed-3, East Africa 61</u></p> <p>Muslim Community</p> <p>“I can’t say, white people don’t have heart problems, they have angina problems... In full ward when I was in hospital, there were just two Asian people and the rest all English... I was in hospital for six months Asian mostly men have little problems can’t say that English people don’t have heart attack they have angina problems... But Asian mostly men have problems man is the main and he takes all stress.”</p> <p><u>Pak Mus-10, Azad Kash 48</u></p>	<p>Sikh Community</p> <p>“British were in Hindustan for over 200 years did they change anything, the only thing they did was to divide, they would have loved for our women in bikini and all.”</p> <p><u>Sikh Ram-5, India 63</u></p> <p>“Have you seen the <i>ghoras</i>, they get married and tomorrow divorce.”</p> <p><u>Sikh Ram-3, India 62</u></p>
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Wages & Employment

<p>Christian Community</p> <p>“Just to maintain this lifestyle for the whites it easy as they get easy jobs like if they come and survey the building they get £150 but for us to get that money we have to work for 3-4 days.”</p> <p><u>Tam Chr-1, Sri Lanka 36</u></p> <p>“We have to survive with £150; we have so much pressure, we have to survive with one week and they make in one hr for survey, it’s a bit difficult.”</p> <p><u>Tam Chr-2, Sri Lank 34</u></p>	<p>Sikh Community</p> <p>“Jobs, no jobs for us, they don’t want us to come up, that is why we are all into business, you see all Asians are becoming taxis and take always because the <i>ghoras</i> don’t want to they want easy jobs, so why educate our children to work as cab drivers”</p> <p><u>Sikh Khat-3, Kenya 65</u></p>
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Faith-related issues

Place of worship

Role played by the community centre

<p>Church</p> <p>Christian Community</p> <p>“When I came here. I was shocked that someone told me that there are 4,000 mosques you see paid by the government and still these people are complaining”</p> <p><u>Mal Chr-5, India 35</u></p> <p>“We have only one church for all denominations so Christians in Kuwait have to suffer you think over 1,000,000 Christians from Kerala, Tamil Nadu, Karnataka, Pakistan & Syria/Lebanon have to manage on one day (Friday)... so the timings are very tight you know prayer start at 4.00am in morning these Arabs even wanted to destroy even the one we have and we called the American Embassy and they stopped the demolitions.”</p> <p><u>Mal Chr-5, India 35</u></p> <p>Gurudwara</p> <p>Sikh Community</p> <p>“Not everybody likes the food in the Gurudwara, we need change, different people different choices, one might want chapattis in Olive oil and someone would want it different, they have to have different food for the elders and also for those who are diabetic</p> <p>“Here now we have to write in the entrance that there is no allow of drugs, alcohol and meat, for our youngsters because most of them come to Gurudwara for match making”</p> <p><u>Sikh Jat-7, Uganda 61</u></p> <p>“There is very important need to check the food here, I have to get the <i>rotis</i> [bread] from the outside”</p> <p><u>Sikh Kath-3, Kenya 65 C3, FG-13</u></p>	<p>Mosque</p> <p>Muslim Community</p> <p>“We don’t have our own Bangladeshi place of worship and that is worrying me, I am part of the religious group and we need to make some money, if we can’t get our own mosque I will worry as I cant pray five times a day and that could be the reason.”</p> <p><u>Bang Mus-4, Syleth 61</u></p> <p>“One group will start so the other group if they don’t get control will want a mosque, its is not about the numbers, we give good valid reason for mosque, its prestige issue because we have to show our status, money we try and arrange or there is lottery funding.”</p> <p><u>Bang Mus-2, Syleth 62</u></p>
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<p>Muslim Community</p> <p>“You know and I know, nowadays its not all about education, its all about acquiring skills... its long life learning... look at me... we are not bothered look at our people... It’s practically impossible... it’s that we have been coming for two hours a week and still not progressed, and all they want is to eat <i>gosh</i> (meat)...that is all that matters.... The community needs to move forward and there are a lot of things required to maintain a healthy life.... diabetes and exercise on and on top of that its not only maintaining the body.”</p> <p><u>Pak Mus-1, Azad Kash 50</u></p>	<p>Sikh Community</p> <p>We want gym over here or even sauna, what we need is quick food and exercise, people choice exercise system.”</p> <p><u>Sikh Ram-5, India 61</u></p> <p>“No, I have been coming for a while now.” (Health Promotion)</p> <p><u>Sikh Ram-5, Kenya 61</u></p> <p>“Why don’t you go and make a chart document which states what not and what to eat in the Asian community, if there is something at least we will know what is good, it is very simple and even in the <i>langar</i>, like if you take the food, the Punjabi food or even the Gujarat food served in the <i>Mandir</i>, you will know what is good or bad and we will know exactly what we are eating and why.”</p> <p><u>Sikh Kathri-1, Kenya 60</u></p> <p>Maybe we need to add hot water when we have drinks, its not allowed in the Gurudwar compounds, I know that but there is always an issue with the committee, we need funds and they don’t let us service alcohol and when weddings comes there is good income to generate and there is always fight in the annual year end, last year we have to call police this is always causing us to have family problems when the auditor tells where the money goes and this is definitely affecting, you look at all the Gurudwara and you will see that the most heart problems are around April when the year ending with all these issues, last year they removed the talvar, what if anything happens?”</p> <p><u>Sikh Khatri-3, Kenya 65</u></p> <p>“Our leaders are not qualified, they will just listen to what the <i>ghoras</i> tell, hey come and shout in front of us and with the <i>ghoras</i> they are like mice.”</p> <p><u>Sikh Kathri-3, Kenya 65</u></p>
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Religious Principles/Religious Reason

<p>Hindu Community</p> <p>“Cholesterol levels, like karma, we don’t have control on our levels, that’s how we are born with.”</p> <p><u>Guj Mixed-5, East Africa 54</u></p> <p>“There is no explanation as to why plane falls, like the Russian plane which crashed last night and over 120 people died, there is no explanation as to why, I think its in the Hindu belief that its karma, what you do come back to you.”</p> <p><u>Guj Mixed-1, East Africa 61</u></p> <p>“I have read about a Dr Niranjana Acharaya, who says that there is a link between plane crash and heart attack, they are related to each other and if one person died in India at the same time one dies in Australia, Africa and America.... There is something like gravity that is causing at the same time in different places on planet.”</p> <p><u>Guj Mixed-2, East Africa 64</u></p> <p>“It’s the gravitational problems that causes heart attack, may be other planets like Neptune and Pluto, astrological influences there are certain things that are fallings from down on the Earth and causing heart attack. What is falling on the Earth surface I don’t know, but it causes heart attack, when a plane is flying the things which are falling down from other planets even can cause the plane to fall down.”</p> <p><u>Guj Mixed-3, East Africa 61</u></p> <p>“If someone curses, like this dog doesn’t deserve the lottery or big house, all this affects your body.”</p> <p><u>Guj Loh-2, Tanzania 48</u></p> <p>“If anything happens we take the blame on our self like being superstitious like the black cat crossing the road or sometimes if a new bride comes home and if there are lot of problems and she goes back.”</p> <p><u>Guj Loh-2, Tanzania 48</u></p>	<p>Muslim Community</p> <p>“Ramadan time its natural, why it happens I don’t know at 5am I close my fast and my have last cigs before I close my fast... the whole day I am perfect and when evening comes and you have had your fast broken I can smoke around 5-6</p> <p>Even around 10 in one time”</p> <p><u>Guj Mus-2, Kenya 55</u></p> <p>I am really appreciating anyone who no smoke, but I enjoy it... anyway we will die and I have not committed any, sin why should I stop, I smoke 20-30</p> <p><u>Bang Mus-8, Syleth 64</u></p> <p>Sikh Community</p> <p>5cd- “Nowadays if you have more and more problems, more and more pressure on you and each and every string of pressure is affected has a huge effect, how I look at things is that if any part of your body is not right, or not function properly, it has an affect on your body some where.”</p> <p><u>Sikh Ram-2, Kenya 64</u></p>
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Question six- Do you have any difficulties with the healthcare system ?

Appointment	
Health Promotion/Advice	
Hospital facilities	
Medical Practitioner	
GP	
	South Asian GP
Payments	
Health Promotion/ Advice	
Medication	

Table 5.10 Health Care

5b.6	Appointments	Health Promotion	Hospital facilities	Medication
P	2	1		
G				
Z		1	1	
M	1	1		
S	1	1	1	
R		1		
T		1		
B				
E			2	
L		3		1
J		3		
I				
C	1	5	4	2
Total	5	17	8	3

Table 5.11 Medical Practitioner

Med Practitioner	GP	S GP	Payment	Health Promotion Advice
P		7		1
G		1		3
Z		1		2
M	3			1
S		4		1
R				
T				
B				2
E				
L		1	1	1
J				
I	1			
C	1	3		4
Total	5	17	1	15

The sixth question was based on the difficulties faced by the South Asians within the healthcare sector. Six main themes emerged from this discussion. Muslim, Sikh and Christian participants mentioned about the difficulties in getting appointments. Some of the participants even ended up lying to make the appointment as urgent. Those who managed to get an appointment felt that the time allocated is very little.

Health Promotion - The Hindus showed very basic or poor understanding of health promotion/campaigns. A few participants felt there was very little sexual education taught in schools and that could have an effect on later stages of life. There was also misunderstanding of the campaign about five daily portions of fruit and vegetables; they understood it to mean consuming five fruits per day. Christian migrants had a good understanding of nationwide campaigns, research issues and also smoking campaigns. The Sikh participants wanted to know more about health promotion, as they were never given any health advice on ways to change their lifestyle. Some felt

that life might have been different if they knew about what to eat and about exercise in the past, and felt that health promotion material is only printed in English, which makes it even harder for some to make changes.

Hospital Facilities- Most of the older migrants very not happy with the facilities provided. Sikh and Hindu participants expressed concern about the lack of vegetarian options, especially when halal food is offered, and about everyone thinking that all South Asians eat meat. Some even felt that even when they were provided with vegetarian food alternatives, the food was not fresh, but microwaved. Most of the older migrants also mentioned the lack of translators.

GP- the new migrants did not mind seeing any GP, whereas older migrants preferred South Asian GPs with their native language skills, and have difficulty in finding replacements when such doctors retire. One Muslim participant was not happy with his new South Asian GP because he cut down his number of medications. Some participants' South Asian GPs advised them on how to make changes in their lifestyles. Some Muslim participants feel that their GPs are over-prescribing painkillers, and both Muslims and Sikhs mentioned a lack of eye contact when they have one-to-one sessions. Many participants expressed a need for more translators, as they felt that it was inappropriate to use their children for this purpose. One Hindu participant felt that GPs are now asking for money even for a sick note. Most of the participants mentioned that their GPs do speak to them about health promotion issues. Christian and Sikh participants drank a glass of wine/beer as recommended by GPs, but were not aware of the appropriate quantity. Muslims do not drink, but some participants astonishingly mentioned that their GPs advised them to smoke again.

Appointments

<p>Christian Community</p> <p>“If you have a problem from two days you have to mention from five days, if you say two days they will say wait for two more days as it is not that serious.”</p> <p><u>Mal Chr-5, Indian 35</u></p>	<p>Muslim Community</p> <p>“First of all you won’t get an appointment straight away, if you are feeling bad you won’t get an appointment... if you need an appointment straight away the GP is always busy... I don’t understand, what is the having the opportunity later.”</p> <p><u>Pak Mus-9, Azad Kash 62</u></p> <p>Sikh Community</p> <p>“When I need to government why it is not there, that is the point you see, who has set the seven-minute rule, if the doctor thinks I need more time then I need more time, he should not worry, in BUPA if they charge you say £100 for one hour, I am sure you will get one hour and no one will miss the appointments.”</p> <p><u>Sikh Kath-5, Kenya 63</u></p>
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Health Promotion/ Advice

<p>Christian Community</p> <p>“There are research projects and you can see that changes of new research every year generally if you do more exercise or that sort and you are healthy.”</p> <p><u>Mal Chr-3, Indian 36</u></p> <p>Hindu Community</p> <p>“They talk about five fruits a day especially with the Asian community good for us and kids too, so if we cut down the amount of oil, its good for the digestive system, I do agree that fruits are good, but our food is also good for the heart, do you think that five fruits a day, how much will it prevent the heart [disease].”</p> <p><u>Tam Chr-2, Sri Lanka 35</u></p>	<p>Muslim Community</p> <p>“One level lack of education and lack of commitment, we have enough opportunity in this country, if somebody is not willing to do then... I have tried different ways of helping people to move... We provided Thai-Chi, gardening, balling massage, yoga etc and accept people to come in the beginning 2-3 come and then they lack interest and then they don’t want to do it. Since everything is free people are not interested.... Everything has to come from itself you can force it down the throat... We have had discussion, discussion and discussion and in the end all they need is meat and that is it.... We even tried to make our healthier.”</p> <p><u>Pak Mus-4, Azad Kash 52</u></p> <p>Sikh Community</p> <p>“Any literature words are written in English for the white community, and do you think the whole population reads the leaflets?”</p> <p><u>Sikh Ram-2, Kenya 44</u></p>
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Hospital Facilities

<p>Christian Community</p> <p>“I am happy if I get Asian food I don’t get I don’t worry, I try Asian or any food.”</p> <p><u>Tam Chr-1, Sri Lankan 36</u></p> <p>Hindu Community</p> <p>“They need to get food from home and you know in our cooking you cook the best and not look at salt/spices and also the sweet, the nurses will say ‘yes, yes’ and there is no proper instruction and how and when needed, we have to tell these people what our needs are.”</p> <p><u>Guj Mixed-1, East Africa 62</u></p>	<p>Sikh Community</p> <p>“People are eating bread with tea because they are vegetarians and here they don’t understand that vegetarians don’t eat meat/egg and fish and also oil they use has to be strictly animal fat free.”</p> <p><u>Sikh Ram-3, Indian 61</u></p> <p>“I went to hospital had an angina attack very mild and I was shocked that there were no Asian people.”</p> <p><u>Sikh Ram-1, Indian 60</u></p> <p>“They go the food tasting in hospital and they won’t tell them then that the food is microwave and the <i>ghoras</i> get special food fresh made we get the micro-food, if you have educated people in the community then only it will have effect.”</p> <p><u>Sikh Ram-3, Indian 65</u></p>
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General Practitioner

<p>Christian Community</p> <p>“There are so many Asian GPs who just want to get money and do nothing.... That is my personal opinion.... When we went to have some check-up they for the sake of get rid of us.... Okay this is normal, if I say. I have diabetic problem.... They will ask questions ‘Why you feel like that’.... I know because it is hereditary problems.... Like loosing weight 10 pounds/ thirst/ urine 2-3 times in night... these are the symptoms and the GP will say ‘Everyone urinates in the night.... everyone is like that’... I said ‘okay.... See you later...bye’, so why do we have a feeling for general check-up when I have a problem and they don’t help and not solve the problem? If that is the case and then what should be do?”</p> <p><u>Mal Chr-1, Indian 37</u></p>	<p>Muslim Community</p> <p>“Used to take a lot of medicines and now the new GP cut down less so I no like, out of ten he gave.”</p> <p><u>Bang Mus-2, Syleth 62</u></p> <p>Sikh Community</p> <p>“I prefer the <i>ghora</i>, he is understanding as I can tell him and he is understanding, Asian one is always quick and he wont see you, just by looking on the computer he does a diagnosis.... why don’t they have online consultation may be we can do it by the camera.”</p> <p><u>Sikh Kath-2, Kenya 65</u></p>
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South Asian GP

<p>Christian Community</p> <p>“We speak the same language [Tamil], most of them use the service as he is from home, and he understands us.”</p> <p><u>Tam Chr-2, Sri Lanka 35</u></p> <p>Muslim Community</p> <p>“I think the main problems are with the Asian doctors and a lot of people can’t speak English and that’s why they go to him but GP can’t speak all language our people need to understand that I know translators are expensive but it’s less embarrassing that asking a mother to take her young son and making the GP asking embarrassing questions.”</p> <p><u>Pak Mus-3, Azad Kash 36</u></p>	<p>Sikh Community</p> <p>“Yes we prefer Asian one, he speaks some Urdu and we understand, difficult with the <i>ghora</i>, he will say something which I no understand.”</p> <p><u>Sikh Kath-5, Kenya 63</u></p> <p>Hindu Community</p> <p>“If I need a sick notes he wants £50 for that I think it’s a bribe and he says that is the normal charge because they know if I went to work I will earn around £80, so why not give him some money too... that is bad, government needs to do something about it.”</p> <p><u>Guj Loh-3, Tanzania 45</u></p>
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Health Promotion Advice

<p>Christian Community</p> <p>“My friends father was taken to hospital, and by the time doctor came he died, doctor told his son if he consumed alcohol once a while he wouldn’t have been died.”</p> <p><u>Mal Chr-1, Indian 37</u></p> <p>Hindu Community</p> <p>“There is this book which I mentioned earlier, American book you see, very good for heart patients, but simple things like how much water to take for blood pressure, or vitamins which need to be taken, if only our GP took time to mention these things, I am sure there will be less amount of heart problems in our community.”</p> <p><u>Guj Loh-1, Tanzania 56</u></p> <p>Muslim Community</p> <p>“I had heart problems 7 years ago and doctor advised me to quit smoking... but sometimes I still smoke now you see, because you have stress, it is the main problem for the Asian families”</p> <p><u>Pak Mus-3, Azad Kash-53</u></p>	<p>“Yeah, the doctor say me put so much of weight that he was concerned you are putting so much weight that it will affect my heart, I cut down and then the doctor told me “Smoke Again” I was always angry at the kids and then the GP told me start smoking again.”</p> <p><u>Guj Mus-2, Kenya 55</u></p> <p>“Yeah well I am sorry to say even after the Dr recommended, I still didn’t follow the instructions, I still smoke.”</p> <p><u>Bang Mus-5, Syleth 58</u></p> <p>Sikh Community</p> <p>“I do suffer from high blood pressure and basically I haven’t done much exercise, basically on lifestyle issues, I have tried to change my diet and doctor has told me take less salt.”</p> <p><u>Sikh Jat-3, Uganda 60</u></p> <p>“My doctor said a simple thing, it is like an open drain and if you don’t clean it then you will get blocks and one day it will get blocked.”</p> <p><u>Sikh Kath-1, Kenya 60</u> “I don’t use, my doctor recommended to drink, he says one peg whisky with hot water for six months will be good for the heart, but I don’t drink, Asian doctor, recommends that this will also help in me reduce weight.”</p> <p><u>Sikh Kath-3, Kenya 65</u></p>
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CONCLUSION

The South Asian migrants in this study shared many similarities in their understanding of the risk of CHD, despite their other cultural differences. Most of the participants were aware of the risk of CHD from different mediums of information; they interpreted “people” as meaning ‘white people’ (i.e. non-Asians), and felt that they experienced totally different risk factors.

Indian Punjabi and Pakistani participants shared many similarities despite their different religious and cultural beliefs. The reason could be that before partition in 1947, they both originated from the same areas. Hindu participants from different castes did not show any major differences, and universally believed in the principles of *karma* and *dharma*. Caste has a huge influence within the Sikh community. In spite of caste being banned, it is widely practised within the community, especially in marriages. Gurudwaras are named based on their caste, as in the example of the Ramgarhia Board Temple.

Christians linked cooking with CHD. They felt that the onions sold in the UK were the white variety, not the red ones they were previously accustomed to, and because of that the oil consumption was greater. The South Asian diet is linked with the area of origin. Those from the coastal regions used coconut products in all aspects of their cooking, and believed that olive oil is good for skin texture. Participants had different dietary needs; some were vegetarian, while others preferred fish or meat. Bangladeshi participants did not like the taste of salmon because it was sweet; Sri Lankan liked their local fish, which is imported. Most of the participants who eat meat mentioned that it was cheaper and tastier than vegetables. They were willing to make changes if they could be taught how to read labels when buying food from supermarkets. Hindus believed that they followed a healthier lifestyle as being vegetarian, and Muslims did not believe that there is a link between CHD and smoking. Christians and Muslims talked a great deal about role models within the community. All religious groups had issues with their GP; no one was satisfied with the long waiting period before an appointment and the limited amount of time they could spend with their GP.

Chapter Six

Analysis

Introduction

In the previous chapter, I discussed the results and ways in which the themes were generated from the questions. Twelve categories were identified from the interviews and were grouped into three themes: psychosocial factors, conventional factors, and health experiences.

6a. Psychosocial Factors

Psychosocial factors have been shown to play an important role in the aetiology of CHD. A strong association between CHD and socioeconomic status has also been well established. Socioeconomic differences may negatively affect the later prognosis and quality of life of cardiac patients.

Anxiety and Depression

South Asians are known to be very emotional people. Williams *et al.* (1997) highlighted that previous studies have underestimated the levels of distress among the South Asian groups. Hemingway *et al.* (2001), in their groundbreaking research on civil servants, showed a higher level of stress, depression and decreased social support at work among South Asian men compared to Caucasian or Black men. Psychosocial factors, anger, social isolation and depression, have been associated with increased morbidity and mortality from coronary heart disease (CHD). The majority of South Asians living in the UK occupy low paying jobs. Ware (2007) showed that younger men have a higher stress level, and that age plays an important part in the elevation of high cholesterol, which to a great extent also has an impact on blood pressure. Kubzansky *et al.* (2006) linked anger, anxiety and depression to CHD.

South Asian way of life

Most of the South Asians interviewed come from rural backgrounds and they have continued to function along the groups they originally belonged to. There is a hierarchy system in South Asian society, whereby families within groups are

constantly monitored from the outside, by others within the group, and there is also a huge burden on individuals' behaviour, in that each member is responsible for the person next on the hierarchy.

Before the Partition of India in 1947, the Indian Subcontinent was one big country incorporating modern India, Pakistan, Bangladesh and Sri Lanka, as discussed in chapter two. In addition, there are regional variations in these countries that reflect tribal, caste and clan differences. The indigenous community in the UK assume that all 'brown-skinned' people are from India/Pakistan, but Bhopal *et al.* (2003) clearly highlighted that South Asian people are not homogenous, because they vary in their lifestyle, religious attitudes, innumerable languages and dialects.

C6 (a first-generation Sikh Ramgharia from Kenya) noted that his generation had more responsibilities and worries than present day youths. However strongly or negatively they opposed the culture and attitudes of their host nation, they just got on with their lives. One participant told the researcher:

There is no gain, without any pain. Our people have a lot of stress; they have built in the society of Indian mentality. Sikh Ram-6, Kenya 55

According to C6, stress is part of his culture for numerous reasons and he accepts it as part of his everyday life. The South Asian way of life is based on the concept that everyone else's problem becomes their personal problem. The pain and difficulties that some pioneering generations endured when they first landed in Britain ranged from sending remittances to their family to chain migration, racism and other work-related issues, as most of them had a little or no education at all. They had no option but to work long and unsociable hours. These difficulties over the years paved the way for the next generation to be easily accepted as citizens and not immigrants.

Many second-generation South Asians believe that they are between two worlds, being neither British nor South Asian fully. The new migrants have a special name for them "BBCD" (British-Born Confused Desi). Some accept that racism still exists within the indigenous community, while others like J3 (second-generation Jain from the UK) accused his community of double standards, and went on to explain why:

Well, the first issue is race, but let me put it in Asian terms: 'caste'. We are so particular in mixing with our own race and we say that we are not racist, I tell you we are the biggest racist of all, in meetings and gathering they always want to know your caste, if they feel that you are higher or lower they will tell their kids not to mix, like drilling them from the beginning that we are different. Guj Jain-3, Kenya 40

People like J3 are sandwiched between two worlds. On one side they have to please their parents when they are at home, and on the other side their white colleagues at work. What J3 finds demeaning is that within his community, caste and social status still play a key role. He highlights that before people accuse the white community of racism, people have to shun the old practices of caste hierarchy not pass it on to the third generation.

New migrants like M5 (Malayalam Christian from Middle East) also felt the same as J3. Being new to Europe; he felt he did not receive the support from his fellow South Asians and recollects the stressful experience that he had to endure:

These Indians and Pakistani always first thing they ask me, where you from and what is your religion? When they hear Christian they act different... They can't believe that we are there in India.

Mal Chri-5, Indian 35.

For M5 this is not a totally new experience. Having experienced discrimination in the Middle East because of his religious beliefs, he migrated to the United Kingdom to feel safer and experience a tolerant society. But sadly for him, the community that he relied on has let him down, causing him worries and stress.

Most South Asian religions now profess to be against caste segregation, but people make exceptions when choosing a bride or bridegroom for their children. Most parents would want to be involved in finding the right match for their children from back home, through their extensive network of families and friends. Family status and caste hierarchy plays a very important role, and in some religious groups the matching of horoscopes adds to stress levels. One of the key aspects of the South Asian way of life is worrying about their children, their close family or *biradari*, and friends who might be far away in East Africa or in the Indian Subcontinent. The possibility of return that was once an ideal (Anwar, 1979) is now transformed to acceptance of a permanent stay. What most of the pioneering immigrants are hoping for is a safe and

secure passage for their remaining extended family and friends to the United Kingdom, through the possibility of marriage.

Most of the participants in the study maintained close ties with their extended family back home, but for both I3 and I8, first-generation Bangladeshis, the government's new stance on immigration is making it very difficult for those who are looking for prospective brides or bridegrooms from their home country:

We hear so many stories and keep thinking one side it's our daughter and the other side its helping someone coming to this country, these white people can make all laws the but there is always a way out

Bang Mus-3, Syleth 65

Worries and too many anxiety problems, like too many family members in Bangladesh and this new government (Labour) they want to make difficult for us, they don't like religion... they make tough for English (to pass)... Ask English people to pass English in 7.5 [there is a 6.5 minimum requirement for IELTS] I tell you they might also fail, I don't want to study English, my family only want to come to Britain.

Bang Mus-8, Syleth 64.

The participants not only highlighted their frustrations on new stricter cross border controls, but also the compulsory requirements to study and pass English, to a standard that some felt the local English-speaking white community would find difficult. The minimum score in IELTS (International English Language Testing System) is now a minimum score of 6.5, required by the Home Office in the UK as a language qualification for people applying for British citizenship.

One issue that is widely talked about is sex education and sexual issues. Shaw (2000) clearly highlighted that men prefer to talk to their *hakim*, a Unani doctor using traditional medicines like homeopathy for healing purposes, rather than their GPs. Some feel ashamed and shy to discuss these issues with their GPs if they speak their languages or are from their same area or clan. They feel much more restricted and fear a lack of confidentiality which will be discussed in detail under the third theme (health information). As explained by J1 (second-generation Jain from the UK), some find it hard to talk to the GP:

It's a personal matter, I think we are not free in sexual matters, we should not and feel shy to talk about these things with our doctor

Guj Jain-1, Kenya 45

According to Shaw, (2000: 203), one of the reasons is that Western medicine is seen as *garam* (hot), in comparison to homeopathy, which is perceived as less harmful. She also feels they can be much more frank and open with their *hakim*. However, although most of the older immigrants prefer their GP to be of South Asian origin, issues related to sexual matters cannot be talked about freely and openly as they fear that confidentiality and trust could be broken. Added to that, they feel frustrated that they have much less sexual activity than their white colleagues, and feel they cannot release their negative energy which is building up within them and which over time could be harmful. As P5 (first-generation Pakistani from Azad Kashmir) illustrated:

Sometimes we are weak and there is tension main thing is family structure, different in Asian and white they have sex with any one you see and release their tension Pak Mus-5, Azad Kash 66.

A second-generation participant like J3 tries to explain with the help of quotes from the GP (as a form of authority):

Like one GP said we have less sex than the whites and that could be the cause I know my neighbour had three kids from different partners, when I think of them there is no stress, as they live like the jungle you see, have sex with any partner and have as they come by, God has given a brain.

Guj Jain-3, Kenya 40

Both participants P5 and J3 shared the similar belief that South Asian men have less frequent sex with their partners, and this could be for numerous reasons. The myth is that majority of white men have no responsibilities, change partners frequently and live a relaxed life compared to the responsibilities and worries they (South Asian men) face due to extended family members in the UK and other countries.

J3 summed up the issue by explaining that in every community there are good and bad things that could be learnt and having come from the generation which is still on its cross roads, he feels optimistic of the future:

I think we need to take all the good things from the *ghoras* [whites] like the diet and attitudes but not lifestyle, we could mix and match like a buffet, you take what you want leave the rest, we should have taken all the positive parts and left the remaining, when will we learn? Probably some day. Guj Jain-3, Kenya 40

Joint family system

Culture has been defined as the way of life that influences an individual's thinking, based on beliefs, norms and shared values. South Asian culture has always been dynamic and evolutionary. Family and community relations are one of the important forces in the lives of South Asians growing up in Britain, as they shift between community identities and social statuses in their everyday life.

Recent evidence has shown that there is a shift towards a more nuclear family system. Second-generation South Asians, with their new-found wealth and education, are moving to more affluent areas. For C2 (first-generation Sikh Khatri from Kenya), this is also one of the reasons why there is constant anger and stress within families, as their control over their children is diminishing with time:

It's a big issue; single family structure is not good for the heart; all heart.
All joined families are breaking down and that is why the heart issue.

Kath-2, Kenya 65.

For C2, this is one of the many reasons why elders in the community worry about the transformation of the traditional family system to a more dispersed nuclear system. For second-generation participants like J1 (second-generation Jain from UK), change hasn't come easy as he grew up in a joint family system:

Nowadays, we have to work hard to pay bigger mortgages, because previously, we used to want to live together, with the whole family on one street. But today, as we got educated and started following modern ways, we want to move away from the city. Guj Jain-1, Kenya 45

J1 feels that breaking tradition has come at a price, as they now have to put in longer hours at work to pay for their expensive mortgages. They also need to become more independent, and cannot rely on help and guidance from

close family members, which in the past was taken for granted. According to the South Asian culture, one of the benefits of the joint family system is that women are given a lot of support during childbirth. They are encouraged to spend the last six months of pregnancy and the first six months after childbirth at their parents' home. The collapse of the joint family system has changed the dynamics of the South Asian hierarchical system, where elders had a say in each and every family matter. The early as well as the late migrants still prefer the joint family system as compared to the second-generation, who feel liberated and want their freedom and space. Hemingway *et al.* (2001) highlighted that a lack of social support could enhance distress among individuals. South Asians are a very close-knit group of people, and the joint family type of living was a common feature among the earlier migrants to the UK. However, I5 felt that the joint family system was also a cause of stress within the communities as there was very little space for anything:

We are big family and we have to adjust in small houses. Yeah, the environment is going to be a bit more closed with bit height, the free space, and they don't have that privacy and the ability to move on their own; and you share your space with several other people. Obviously, you don't have that flexibility, that room space for regular exercises; the area where you live, the condition in which you live, the condition of the area, make the difference. Bang Mus-5, Syleth 58

Although most of the first-generation migrants preferred the joint family system, some felt that it restricted their actions.

Being a South Asian in Britain

The South Asian population is constantly evolving. Since the 2001 Census, the population has increased from 1.5 to 1.8 million. Not only are they the largest minority group in the UK, but also the wealthiest, and studies have shown that they are becoming much more influential. The majority of the South Asian population is settled in areas in and around London, the Midlands and Yorkshire. Glasgow and Cardiff also have notable pockets of South Asian community. Incidents of racism have escalated since the 9/11 attacks in America, but I8 (first-generation Bangladeshi

from Syleth) is more optimistic, and thinks that leading a peaceful and stress-free life is the only remedy for those who are worried and stressed out living in Britain.

My thinking is all down to heart disease is all down to your brain. If you are cheerful, you have patience or anxiety; if you are cheer up and your heart will be healthy. Bang Mus-8, Syleth 64.

The older migrants had little or no interaction with the indigenous community, as they found it difficult to socialize, because of their religious beliefs and commitments. Those who did interact due to work and other reasons, found the relationship complicated and stressful, as highlighted by C3 (first-generation Sikh Khatri from Kenya):

I never knew what is colour person is. One day in job they told someone my manager that I am sending some colour person. I just can't believe it and after that I do appreciate how much are black brothers have been through; outside they will say love, mate and when you see them in the outside work they look as if they don't know or feel embarrassed to know an Asian fellow. In Africa I didn't know what is white or brown, and here I have to face it always this divide and rule policy. Sikh Kath-3, Kenya 65

Most Punjabis are sociable and hospitable people, and love to mix with other races. Hence, for C3, being ignored and called names is not only hurtful, but stressful too. Others like M5 (a new immigrant from the Middle East) shared similar thoughts:

Here the difference is that they don't tell you on your face they tell you on the back, much better than Kuwait here they also say love, lovely so you feel better Mal Chr-5, India 35.

What M5 and C5 have experienced is the double standards among the indigenous community; a love-hate relationship, not knowing if you are either being accepted or ignored. C3 appreciates what other communities have had to put up with. He wants to mix with the wider community, but feels that he is not welcomed. He goes on to explain the situation he faces; he has the SA community on one side, and he is not welcome on the other side:

I don't want to go to the disco, I don't want to go to the pub, for *ghoras*... that is important in the Friday, but we like different things. If you are not worried anybody, you are a free man, free wine, but in our community they don't allow us to think. Sikh Kath-3, Kenya 65.

What most of the earlier migrants in the study highlighted were the complications and constant struggles they have to face in their everyday lives. They end up with fewer indigenous friends than new immigrants, who easily socialize with locals as they share similar socializing styles, such as going out, drinking alcohol, and a modern approach towards religion. Sometimes new migrants also experience grief from the locals. However, as M3 explained, they are still happy that they had someone who could stand up for them:

You know my team leader is a white guy who is over 6 ft tall and he hates people who are racist. So when we go to club and if any one says something to me, he will always be there to stand for us; he hates racism and he always says we all are human. Mal Chr-3, India 36.

The newer and second-generation migrants found it much easier to interact with the indigenous community. Though J3 has a wider circle of European friends (second-generation Jain from the UK), he feels he is still being constantly picked on, and finds his indigenous white friends prejudiced:

I had only English friends, though you are with them you are always drawn by your kind. Though I was there, they always used to joke about Asians and then apologise by saying: 'sorry mate, you are not like that'. Growing up always made you feel that you are different and all the world issues are your problem. Guj Jain-3, Kenya 36

Just as the pioneering immigrants from East Africa were called “*twice migrants*” (Bhachu), George (2005) called Malayalam speaking immigrants in the USA, “*thrice migrants*”; UK was the third residence for Malayalam and Tamil speaking participants that they had moved to in the last ten years. Their journey started from their home state of either Mumbai or Delhi, and once they had the relevant experiences and the visas, they moved on to either the USA (Tamil) or Middle East (Malayalam).

New migrants followed various different pathways. Regarding the Tamil participants (new migrants from USA), after they completed working on projects affiliated to the solution of the millennium computer problem (Y2K) they lost their jobs, which forced many of them to come to UK instead and find alternative jobs in their relevant fields; men came first and women followed. In the case of the Malayalam participants (new migrants from Middle East), women came first and men followed. All the women

participating in the study work in the NHS as nurses. Once they were settled down after their initial training and visa formalities, they would send for their husbands. In both the cases, visa formalities and initial separation from their partners ranged from twelve to eighteen months. M2 (new migrant from Middle East), having lived and worked in the Middle East, finds life in Britain better though he initially faced some levels of stress and hardships when compared to the life in UAE, and goes on to explain a few things about his Arab employers:

There is too much stress from the Arabs, but they overload you with problems and only one day off and the Arabs treat you badly.

Mal Chr-2, Middle East 35.

M3 (new immigrant from Middle East) is much more optimistic about the future in Great Britain and feels that you certainly face difficulties when moving to another country:

That will always be there once you come out from India. Racism is always there, but more in Kuwait than here. Mal Chr-2, Indian 35

Most immigrants face difficulties trying to adjust with their newly adopted country and people. What M1 (new migrant from Middle East) found similar between the indigenous population and the Arabs were:

For them everyone is 'Paki'. Mal Chr-1, India 37

Being treated with respect and dignity was a priority for most migrants. All had different stories to tell, as every country and place they had spent time in was a new experience. Lately, there has been a surge in research among the South Asian community. Some of the older migrants were not very keen to take part in any form of research, as they felt they were over-researched and did not see any changes in their lifestyle. Past researchers promised to give feedback once the study was over, but in due time they all disappeared and were never to be heard of; as E3 (first-generation Gujarati Patel from East Africa) explained:

I know previous surveys, people come and just get data and that's it; they don't bother after that. Guj Mix-3, East Africa 61

There are very few research studies and clinical trials that involve South Asians. Though some were conducted in the community, they were never given proper feedback and findings from the study were never discussed.

Special Events

Most South Asians never say “no” to unhealthy foods served at weddings, social gatherings and religious festivals as a matter of *izzat* (pride). No one wants to stand out and become the centre of conversation within their communities; some of them believed that pride is more important than health, and the most important attitude is to please others rather than think about the consequences of their particular action or behaviour. Though most of the participants were aware of the unhealthy food that was being eaten at these gatherings, no one wanted to challenge traditions and choose healthier options, especially for weddings and religious functions. C1 (first-generation Sikh Kathri from Kenya) feels that there always is a competition of who can afford bigger and better parties within the community:

Why not, in parties take a plate and test the food; we have weddings every week, on birthdays, first birth anniversaries and its all show parties. We have to show who is better than the other, put it out for testing and let us know what is right in that and then a report like this so that we can know exactly what we are eating. Sikh Kath-1, Kenya 60

C1 expected researchers to go around during wedding seasons and religious ceremonies, and collect samples so that they can be tested for the amount of fats, etc. This expectation is not only unrealistic, but also unethical, especially as in religious ceremonies the custom of cooking food in a certain manner, which is being offered to the gods, is an age-old tradition. Participants find it hard to change these traditions, and in weddings, everyone wants to offer the best dishes from back home in a more traditional manner; and some felt that by offering healthier options they might send out a wrong impression. L4 (older Gujarati from East Africa) explained:

Weddings and parties come at such a time when you are helpless. If you tell the host that you can't eat, they are not interested and don't show any sympathy; you are forced to eat *laddoos* (Asian sweet) as the sweets are

unlimited, though most of them are diabetic. But they will tell you that you have to eat as it is their only son's/daughter's wedding.... Our culture is like this. Guj Loh-4, Tanzania 62

Special events like marriages, birthdays and religious festivals are a time to socialise; mid-November to December and then from mid-January to May is usually the wedding season. Diwali, the festival of light, usually occurs around the third week of October, as B3 (first-generation Jat Sikh from Uganda) explained:

There are so many occasions every week; there is either a wedding, birthday party, engagement, etc., and always the food is rich you see, there is always something or the... If there is a marriage, you have to eat rich food and sweets or they will feel bad; every weekend you are busy with the party here and there. Sikh Jat-2, Uganda 60

No one wants to provide or serve healthier options, as it might compromise the taste, and also brings their honour at stake, as C1 (first-generation Sikh Kathri from Kenya) feels:

In parties, if we reduce the ghee they will say we are saving money, we need more information on oil, margarine, ghee & butter.

Sikh Kath-1, Kenya 60

C1 wants to change, but finds a lot of resistance from the community. Festivals are one of the few opportunities where wealth can be displayed and honour and pride are at stake.

New immigrants also congregate over the weekends in small groups, with people from their own community, to celebrate birthdays, wedding anniversaries, engagements and newly born babies. Most of them try to adjust shift duties and make every effort to attend these events, as M5 (new immigrant from UAE) stated:

We go regularly to attend weddings, as there are birthdays/weddings/engagements and others. Mal Chr-5, India 35

Among the new migrants, there is not much of a competition to display their wealth as most of them have similar jobs. Their extended families in Britain are their children:

Don't have the stress like their parents. They will just think if it works it works, if not, leave it and don't worry about it. Sikh Ram-2, Kenya 64

This quote from R6 (first-generation Sikh Ramghria from Kenya) clearly illustrates the difference one generation makes. Most South Asian children are no longer considered migrants, thanks to the struggle and sacrifices by their immigrant parents. They enjoy many advantages, such as security and stability from the community networks, infrastructure and institutions, which were built by their parents over the last five to six decades and now play a crucial role in their social development

Most South Asian children are under pressure to perform well academically. According to Anwar (1998) and Ghuman (1994), South Asian parents value the importance of education, and their views on discipline and the school curriculum are both, traditional and instrumental. One of the first-generation participants told the researcher:

I have achieved a jump from a cycle to a car, I expect my kids to go from a car to a plane.

Anwar (1998) mentioned that more and more South Asians are staying in school after 16, as their parents have high expectations from them, and are willing to make financial sacrifices so that their children could attain university and college education. Some are still willing to provide better support to the boys than girls. Education is seen as a key to a successful marriage and future happiness; but some parents are overambitious, with highest expectations. B1 (first-generation Sikh Jat from East Africa, a car mechanic by trade) highlighted:

Our expectations are so high (from our children).

Sikh Jat-1, Uganda 50

Studies have shown that the children of manual workers suffer from anxiety and depression because of their parent's unrealistic goals. Second- and third-generation South Asians are not as motivated as their parents and experts believe that this is due

to the influence of the Western culture that they have been raised within, which emphasises the importance of sports and a social life. This is clearly highlighted by B3 (Sikh Jat from East Africa), who is worried about the upbringing of his children in a different culture:

It's because of more stress, we have (more) children, you see they grow up now, that's when more stress big generation gap. My thinking is that our children are thinking and doing things very differently there (UK).

Sikh Jat-3, Uganda 60

Everyone wanted his or her children to fulfil their dreams and achieve something more than what they could do. In a recent study on South Asian parents, Abbas (2000: 94) in Birmingham, found that middle class parents are employing tutors to coach their children for entry into grammar schools. He writes:

Some affluent and more educated South Asians were able to accomplish their educational aspirations for their children by sending them to selective schools...affluent parents had the capital and the knowledge to choose which ever type of early schooling they deemed appropriate.

Some parents are not fully aware of the importance of active participation in their children's education, because of their own experiences (Ghuman, 1994). Despite the lack of support from his parents, L1 (first-generation Gujarati Lohana from East Africa) wants to make sure that he plays an active part in his children's education. He is much more worried about what his own children achieve than his parents were about him, back in Tanzania. He goes on to explain:

Back in Africa, we didn't have to work when we were kids; my father never knew which class I was in, and we hardly had any parenting interaction. But here (in UK) we have to go for each and every parents meeting, and all they do is give a bad report (from school) of your kid, and that's the immediate tension; we keep asking why is it not possible.... we are too much involved in the upbringing of our children, so everything plays a part. Guj Loh-1, Tanzania 56

Most South Asian parents believe that the teacher knows best, and that they themselves should not interfere with the educational system. Parents try and go to schools only on invitation from the authorities, when their child is making insufficient progress in their studies or behaving badly. South Asian parents are extremely interested in their children's future and advancement. Although, for some of them, it might be too late to be educated, they expect to see their dreams and aspirations fulfilled through their children. There is now greater emphasis on education, the value of getting ahead, and striving for the best. According to J2 (second-generation Jain from UK), parents are getting much more involved with their children in every aspect of their schooling. They are not just attending parent-teacher meetings, but are now involved in other areas, such as picking up and dropping off children, and becoming stressed in finding car parking spaces:

Parents come to the school front one hour before and it's more like a challenge as to who gets the space. They feel like it's their hot spot and if you take their spot they will get offended. I think some Asians have some *Bekhar Time* (free time) that dropping and collecting kids has become a social task. Guj Jain-1, UK 42

Everyone wants their children to do well in school, because the competition for space exists in universities as severely as it does in parking. Lately, South Asian parents have started playing a much more active role in their children's upbringing, either in the traditional or formal way, and using this time in networking with other families and parents. According to Ogbu (1995:18):

Among Sikhs, for instance, there is a belief that school success determines later success in the job market.

B7 (first-generation Sikh from Uganda) felt that this could only happen because parents are making extra efforts in their children's education if certain behaviours are contrary to their own cultural beliefs:

Asian people are advanced in education because parents take more responsibility than the others, which is why the rate of education in Asians is high, Indians are qualified... Sikh Jat-7, Uganda 63.

Past studies have shown that children of Indian migrants do much better in school than those of Bangladeshis and Pakistanis. There could be a variety of reasons, but studies have shown that Indian community emphasizes the value of education, getting ahead, and striving for the best. Many Indians want their children to become engineers, doctors, or accountants. The poor performance within the Bangladeshi and Pakistani communities is not due to their religious affiliation, but rather to their low socio-economic position in the hierarchy of occupations. Moreover, researchers also believe that there could be a link between the lack of parental involvement in education and language barriers, long and unsociable working hours, and a traditional attitude towards schooling and teachers. I5 (first-generation- Bangladeshi) felt that the children from his community are spending much more time in non-academic activities, which could be a reason for their poor performance in schools. I5 also blamed the British way of life:

Yes, we all have this issue, this culture (British) has ruined our kids, they all want this style cars, German ones, and its competition, you know they start gangs now and all night they stay awake for business, and there are fighting problems, they copy Bollywood movie fights, and that's how they always have with the English kids, I worry a lot.

Bang Mus-5, Syleth 58

For some parents, the British way of life is a major barrier in their children's progress. They feel that the educational system is not as stringent as it was in their home countries; discipline is not valued highly, as a result of which students do not respect their teachers as they used to in the past. In the Indian Subcontinent, schools stress academic learning so that pupils can pass their exams and move ahead. Sports such as cricket and football are regarded as recreational sports, and not at all encouraged as a career option, but merely played after normal school hours. Most of the Indian participants in the study have salaried occupations as compared to Pakistani and Bangladeshi men, who were either unemployed or drove taxis. According to Abbas's (2000:98) study in Birmingham:

Parents of Pakistani origin in the geographically dominating parts of Birmingham are not usually equipped with the same level of educational qualifications or occupational status as Sikh or Hindu parents. In addition, Muslim (mostly from Bangladesh and Pakistan) parents are conscious of the need to uphold strong Islamic and cultural traditions that are intended for their young, particularly in the face of discrimination, and economic and social disadvantage.

Parents' Concerns

Children were the major concern for most of first-generation South Asians in the study. Their expectations and emotions were mixed, as they all wanted their children to achieve more than themselves. What they expect from their children is to be taken care of in their old age, just as they had done for their parents and grandparents, when they had reached their retirement age. According to Kakar (1994), the custom of looking after an elderly parent varies between the Subcontinent and the Western culture. In the Subcontinent, the son takes care of his elderly parents, whereas in the Western countries, it is usually the daughter. According to Rose and Deakin (1969), parents feel that their children are sandwiched between assimilation and alienation; one of the participants told the researcher that his biggest worry was:

They (children) will put their parents in care homes.

Most South Asians are trying to have their parents live on the same street or in the same neighbourhood in order to avoid confrontations between the mother and daughter-in-law. But for some of the first-generation participants in the study, their biggest fear was that their children might abandon them and follow the practices of the indigenous community, as B4 (first-generation Sikh from Uganda) highlighted:

They don't bother of parents and in future also, they will put parents in care homes and not bother, they are becoming like the whites you see, they will be all right, and the coming generation better, but we no change and prepare for attack. Sikh Jat-4, Uganda 59.

Blackmore and Boneham (1996) strongly criticized the stereotypical views of South Asians, that all indigenous white people neglected their elderly parents, and highlighted that irrespective of race or colour, elderly people, right across the

spectrum, felt that they were lonely, disengaged and cut off from their families. The fear of losing one's identity was also clearly highlighted by the first-generation participants. Some felt that their children were losing ties to their ancestral homes and felt like strangers during their short visits. According to Anwar (1998), most of them felt that their children did not value the frustrations and fears that they endured, and the next generation does not have to worry about the "myth of return" (Anwar, 1979). For most first-generation migrants, moving to a new country was a means of improving their status in the society rather than a route to individual social advancement, as B3 (first-generation Sikh from Uganda) clearly highlighted his priority in migrating to Britain:

The whole point of coming to the UK is money. Sikh Jat-3, Uganda 60

B3 also felt that the next generation is much more financially secure and affluent because they are free from the obligation of sending money to relatives and family back in their country of origin. What most of them have to cope with is their biculturalism. According to Portes and Rumbaut (2001:47), home, or the sending society, teaches them about their religion, culture and tradition, whereas the society they live in, or receiving society, teaches them regarding their values, rights and attitudes.

In the rural parts of the Indian Subcontinent, there is no difference between childhood and adulthood. All important decisions, regarding everything from marriage to work, are taken by elders in the family, and it is expected that the younger members will follow the instructions with due diligence and respect, and usually these views are carried over when they migrate. However, the reason for the worry and concern of B3 (first-generation Sikh from Uganda) is that his children are not following the same traditions and values that were passed down from previous generations:

We have high expectations of our kids, you see we were obedient to our parents and we expect the same level of obedience; and then how can they want to go in their own way. Sikh Jat, 3, Uganda 60

Most of the first-generation participants had high expectations for their children; all the parents wanted them to succeed in every aspect of life (Gibson & Ogbu, 1991; Verma & Ashworth, 1996). What worried them was that the younger generation did not value the struggles and hardships faced by them when they first came to Britain.

Fear of losing their children was due to the fact that they were assimilating easily to the host nation, but forgetting the fundamental values and traditions that were passed over from generation to generation. Being open and frank with offspring is something lacking in the South Asian way of life. For example, parents do not find it appropriate to talk to their children about matters relating to sex, as they feel they are too young anyway; this reticence can extend to communication with adult offspring about healthcare and end-of-life issues. The reluctance of parents to communicate with their children was commented upon by J1 (second-generation South Asian Jain from the UK):

It has got to do with sexual education, no one in our family talks about this as they always find you too young to know anything; little do parents know that kids know all this from their mates and books.

Guj Jain-3, Kenya 40

Bad Company

Children around the world go through changes during adolescence (Dansen, 2000). Parents in Western societies expect their children to go through a period with storm and stress (Goodnow & Collins, 1990); as Gibdon-Cline (1996: 268) reiterated:

Most of the adjustment problems were rooted in the external situations in which these youngsters found themselves, rather than in their own internal psyches. However, in our opinion, problems of adjustments arise as internal biological and psychological propensities interact with external societal forces, namely peer groups, parents and the media.

In contrast, the youth of South Asian origin experience most of their difficulties and challenges of growing up in an evolving Western society, where the authority of the older generation is often questioned and challenged. South Asian parents are known to show far greater leniency towards their sons than their daughters, about everything from premarital sex to going out with white girls. Young men and boys are assigned fewer responsibilities than their sisters and spend a great deal of their free time outside their house. This helps them to keep their activities hidden from relatives and other family acquaintances. The birth of a son is more celebrated than the birth of a

daughter because, for some people, the birth of a girl child brings worries and expenses, as she would eventually get married and live in another household.

Most youngsters go through adolescence with a few minor changes (Peterson, 1988; Muuss, 1996), but around 5-15% of them find the transitional period quite problematic (Durkin, 1992), and end up with worries and confusion. These young people tend to drop out early from school and join gangs (ethno-religious) and groups where the culture of taking drugs, tobacco and alcohol is common (Bhattacharya, 1998, p. 169).

South Asian music like Bhangara, has changed and evolved over the years with the fusion of music from the East and the West. *Hustlers HC*, an Asian rap musician, uses his music as a platform to address the culture and politics within the South Asian community, and his famous song “Big Trouble in Little Asia” clearly highlights the concerns of Asian ethno-religious gangs. The lyrics not only illustrate the change in music over the years, but the spread of gang culture and violence within communities, as they fight amongst each other for territory and supremacy. For most of the first-generation participants, this is something totally new to come in terms with, and they felt stressful in dealing with their children caught between two worlds. C1 (Kathri) & R2 (Ramghria), both first-generation Sikh participants from East Africa, expressed concern and helplessness in not knowing about the children’s activities and felt that the government should take the proper steps in order to help them:

Yeah, but we have so much of worries like there is drugs in our community, why can’t the government do something about that, it is important, it is having my heart to beat faster, now our girls are trying all things.

Sikh Kath-1, Kenya 60

When the kids get affected, that’s when the problem begins, when they get into bad company, for whatever reason you see has an effect on you. If they get into bad company or relationship or anything they get affected, it can be anywhere or in your work. If everything is not going as planned, in

your way, you get irritated or in those grounds or problems with your colleagues and all are upset and that also some effect on hear.

Sikh Ram-2, Kenya 64

According to the Sikh religion, alcohol, meat and tobacco use is prohibited. Participants in the study did mention about the exception to alcohol and poultry use, and felt that their children had gone a step further (drug usage) than they did, which is stressful and worrisome. Most of the early migrants felt that they were standing on the crossroads between Eastern and Western cultures, and finding it hard to understand as to why their children were turning to drugs, gang and rap music.

Role Models

Stewart *et al.* (1981) highlighted that the majority of the people select partners and friends purely based on equality. Among the South Asians, the educated tend to mix with people of the same status-quo, and to an extent, this happens in religious places like temples and mosques, where parents try and bring their children in order to get motivated by those who have achieved a great deal in life. C3 (first-generation Sikh Kathri from Kenya), a garage mechanic, felt that these very educated leaders in society are more interested in channelling public funds for their personal gains:

If you have educated people in the community, then only it will have effect. What we have is most educated people Punjabis, but the educated people won't come and talk to the uneducated as they feel the pride that they are doctors so why mix with others, we have leaders who only think of making money and making bigger show, we had one leader who more interested in making his motor shop bigger, we don't have any role models to follow and they don't want to come to the temples to come and waste time looking at the people now who is not giving them advice so they don't get motivated and they don't want to come to the temple, they just don't, they don't have any experience or qualifications.

Sikh Kath-3, Kenya 65

“Between Two Worlds” (Ghuman, 2003)

Within South Asian communities, culture places strict guidelines on what is normal and abnormal behaviour. There are huge expectations from young people in terms of

respectful behaviour towards elders, safeguarding the “family name”, and behaving in an acceptable manner. This is also one of the reasons why individuals when they experience any difficulty in their life are unable to talk about it.

South Asians are made to believe that they do not exist as individuals, but as part of the family, and expected to carry the name and preserve the entity of the group; letting the group down is not an option. In the study, parents with grown up teenagers, on numerous times, did mention being worried about their children.

Youngsters are picking up the habit, practically that is stress, and in this society, when you are a 16 boy or girl you can go where you want.

Sikh Ram-1, Kenya 61

As highlighted above by R1 (first-generation Sikh Ramghria from Kenya), one of his main reasons for being stressed out is because of his children. The youth of South Asian ancestry is caught between two worlds, home on the one side and society on the other; but if they have to choose between the two, family would come first, as they value the sacrifices made by their parents. Modood *et al.* (1994, p. 59) performed a study in England which reinforces their deep-rooted identity:

In the second-generation of every group studied here, there is a strong sense of ethnic pride, of wanting to know about or at least to affirm ones roots in the face of a historical and contemporary society, in which ones ethnicity has been suppressed or tainted with inferiority.... Its significance here is that those young Asians who do not practise their religion, nevertheless recognise their religion as part of their distinctive heritage and ethnic identity.

Knowing the law is one thing, but the constant interference of the government in trying to tell them how to bring up a child is totally different. What they had hoped for their children was to adopt a more traditional lifestyle in a Western society, as B9 (first-generation Sikh Jat from Uganda) explained:

There is a different culture over there and we think (hope) that the culture which the children should adopt is ours, but they are adopting to Western

culture and when they are 18 years they can do whatever they want, this is the main reason we worry about the children and grand children.

Sikh Jat-x, Uganda

The one place the parents know that they have total control over their children is in their religious establishments. Children are forced to learn the scriptures in their own languages. Heller (1999: 7) talked about the politics of languages:

In multilingual nations, linguistic minorities have been created by nationalism, which excludes them.

Most establishments offer language courses as part of the literacy drive, but as Hall points out, the youth of South Asian ancestry would prefer to study a European language that would benefit them in the job market. The Bullock Report argued that community languages were national assets. What C5 (first-generation Sikh Kathri from Kenya) is hoping to achieve is preserving his heritage and culture by forcing his kids to be part of the community and speak the language, without which he fears that his children would adopt the host nation's culture.

We bring our children here by force so that they can learn about the Gurus and the language; it's better than letting them like the *ghoras*. We have to save our daughters, they are our pride. I cannot bear if my daughters respect is taken away, I can give up everything, but not her respect.

Sikh Kath-5, Kenya 63

For C5, respect is deeply rooted within the South Asian community. What causes his concern is that his children are following Western values and culture, which is against his principles. For most South Asian parents, the honour and chastity of their daughters is a matter of great pride and joy, but that has become a concern for C5, as he feels that his daughters are diverging from their core religious values.

The Baheno group

Belgrave Baheno, an all-women group, was formed in the late 1970s and currently holds around 5000 members. This community-based organization is situated in the Belgrave part of Leicester. The main ethos of the group is to uplift the living

standards of South Asian girls and women within the community, by offering courses and advice in educational and recreational needs. To make people aware of its existence, the group regularly advertises on local radio stations and encourages people to utilize its services. All calls are dealt with total confidentiality and there are trained advisers who can help.

According to C1 (first-generation Sikh kathri from Kenya), this whole project is a campaign run by the Gujarati community (majority) against the Sikh (minority):

There is the radio station by the Baheno sisters, who is always advertising, you see this Gujarati they are after us. Sikh Kathri-1, Kenya 63

But Z3 (first-generation Sikh Ramghria from India) and C2 (first-generation Sikh Khatri from Kenya) see it from a different perspective, and believe that not only has the group's influence within their respective communities increased over the years, but it has also been the major catalyst in transforming their daughters from a more traditional to a Western way of life. This has upset them deeply and they fear that their control over their children is diminishing over time.

What they [Baheno Group] have are graduates working for them and campaigning for women's rights, all these factors would make people worry, they know all the laws in this country, all they do is play with family sentiments, they know how our community feels.

Sikh Ram-3, India 62

Having educated lawyers and campaigners in their team has not only made vulnerable girls know their rights, but has also increased their confidence to stand up against the injustices done against them. This group is more or less a voice for the oppressed. But not all parents agree with what the Baheno group does, and some have criticized the group's double standards. C2 (first-generation Sikh Khatri from Kenya) feels that some girls are lured to India on the promises of movies and modelling contracts, but they end up getting married under false pretences:

I know of one case where they take to India for modelling contract and they make movies like wedding scenes and in fact is real marriage and they give it to the high commission and try and get some guys to UK as husbands, it is happening in a good family, that's why I can't stand the

According to Shaw (2000), Bangladeshi and Pakistani parents are in favour of arranging marriages within their own relatives to facilitate emigration, as compared to Sikh and Hindu marriages that are usually arranged. The usual practice within the Hindu and Sikh communities in recent years has been that parents encourage youngsters to attend social mixed events and religious functions so that they can meet eligible partners. But Z2 (first-generation Sikh Ramghria from India) totally disagrees with the concept of children finding their own partners, especially with girls involved. He feels that it is the duty of the parents to find a suitable match for their brides and bridegrooms, and thinks that only Gujratis would encourage their children to date openly.

They don't worry where their daughters go, as they can go anywhere, and do whatever they like, but for we Punjabis it's very important, you know in Gujarat when they attend wedding, girls dress up and boys pick each other up, it's a common thing in Gujarat, but in Punjab you cannot do that.

Sikh Ram-2, India 60

Daughters of Tradition (Ghuman, 2003: 167)

Work and marital status have shown to be associated with health outcomes in women. In comparison to Western societies, South Asians favour religious commitments and differentiation in gender roles. What is expected from a female child is obedience and to remain custodian of the family honour until she is married to another family. Most girls lack their own identity, until they give birth to a child. In most cases, a boy is always the preferred choice to carry on the family name (Culley *et al.*, 2007). Some critics have argued that South Asian girls suffer from psychological stress and tension, because of the strict gender roles and the lack of social identity, as they are born as someone's daughter, raised as someone's one's sister, married off as someone's wife to finally be a mother to someone's children. As Talbani and Hasanali (2000: 617) mentioned in their study in Canada:

Arranged marriages play a pivotal role in maintaining a traditional social structure. Female subordination is expressed, validated and perpetuated through rites and rituals and symbols related to marriage. Z3 (first-generation Sikh from India) also explained:

There is tension everywhere, work, family, everywhere there is tension, when our kids get married, to which caste and when they don't get married from our caste we are not happy. Sikh Ram-3, India 62

In some communities, like the Sikh and Pakistani (Hall, 2000), the schooling and education are planned in such a way that they are expected to groom faithful and loving wives, loving mothers and devoted *bahus* (daughter-in-laws) to their extended families. Girls in some communities, especially the Sikh and Pakistani, are disadvantaged in educational prospects, as parents do not find it important; R6 (first-generation Sikh Ranghria from Kenya), explained:

My conception is different, if you educate a women, if the teaching itself is not right, you are teaching something wrong and she will teach the wrong things to everyone, which will spread more quickly than anything else, to give the right education. Sikh Ram-6, Kenya 52

In contrast, J3 (a second-generation migrant Jain from the UK) highlighted the importance of educating women as follows:

It starts from the birth of the child and mothers play an important role in the upbringing of the child, as the saying goes, if you educate a boy, you educate a gentleman, if you educate a women Guj jain-3, Kenya 40

Honour (*izzat*)

Girls are a mirror reflection of their community and every action is closely watched by those within the community. In most cases, brothers have the responsibility of taking care of their sisters, including escorting them late in the evening if they needed to go anywhere. One main reason why girls are forced to wear traditional clothes and are always restricted from going to restaurants, pubs and discos is because of the prospect of getting married to respected families. Girls who do change and try to move on from the traditional way of life are branded with the name “*ghori kudi*”, in other words, an Asian trying to be modern. These flaws in her character could curtail her chances of finding a suitable bridegroom in marriage.

Family honour is critical for marrying children into good families. It is closely associated with restrictions, judgement and actions focused towards controlling female sexuality.

The ideology of family honour is linked closely with social status and prestige within the community. This concept is embedded deeply within the South Asian Diaspora across the globe, and what most young people of South Asian ancestry face is the encounter with two different ideologies: prestige and honour on one side, while on the other side, they face class and racial inequalities in the society they live in. Within their own worlds they may be of high status, but to the outside world, they are “just an Asian”. Z5 (first-generation Sikh Ramghria from India) explained:

I know a lot of families who have heart attacks when they come to know about their daughters' actions, if our children hurt it has direct effect on us.

Sikh Ram-5, India 60

Z3 also shared similar views regarding this matter:

Punjabis hold their pride and our custom and culture is first important, its honour at stake, people can drop dead without pride and our custom and culture is very important. In Hindi there is a saying, '*Ijjath aap kai hath mai hai*' (honour is in your hands). Sikh Ram-3, India 63

Z5 and Z3 (both first-generation Sikhs from India) clearly noted that honour and family name are closely related to their daughters' actions, as they will bring dishonour to the family name. Z5 and Z3 linked the risk of people having a heart attack to hearing their daughters' loss of chastity.

Among the participants in the study, the Muslims and Sikhs shared similar views and felt that they shared a huge burden of responsibilities if their children acted inappropriately, as parents are held responsible for each and every action of their children, as R6 (first-generation Sikh Ramghria from Kenya) explained:

We have a problem, say we don't want to get insulted and no bad name for the family and if anything wrong, they point at the older people. Youngsters do something wrong, they are not fit to be in the family and

also bring bad name to the family, and then there is the stress and if there is an elder one at home they will blame the elder one.

Sikh Ram-6, Kenya 52

Just like Z3 and Z5, R6 (first-generation Sikh Ramghria from Kenya) shared similar concerns about his children and felt that South Asians, on the whole, worried more about their children than the indigenous community.

If they go out (children) it matters to us and there is a difference with the Europeans as they don't have stress; it's like everybody minds their own business.

As highlighted earlier, Pakistani and Sikh participants shared a lot of similarities in their views and opinions. P9 (first-generation Muslim from Pakistan) felt that families will go to extreme lengths in order to safeguard the family name and honour. According to the BBC, there are an average of 12-15 honour killings a year, most of which are authorised by the victims' parents. Recent honour-killings highlighted by the media have re-ignited the debate of how people are living in total isolation and not in resonance with the outside world:

If something happens to somebody in the family you worry.... but we worry because it might give a bad name for the family; you worry for a lot of things like children, education jobs problems.

Pak Mus-9, Azad Kash-62

Most of newer immigrants followed the traditional practice of arranged marriage, except two Malayalam participants and one Tamil. Arranged marriages are a very common practice among the South Asian Diaspora, where people of the same class, caste and educational status meet, as one participant (J) told the researcher:

Marriage is more like a business venture, mergers, and acquisitions, trading of stocks and just like any new company they have to fit in and adjust with new volatile environments, whatever the circumstance be they do expect a decent turn over.

In some Hindu cases, the wedding runs anywhere between 8-10 days, as most of the costs are taken care of by the parents; there is competition among relatives and friends

on who has the better themed wedding. B3 (first-generation Sikh Jat from Uganda) observed:

If someone spends some amount, the other has to make it even better and call more people, so it's all competition on what the child wears, the saris so expensive, they will only wear once, can't believe it.

Sikh Jat-3, Uganda 60

One of the biggest fears that parents have is that even after spending all this money, children are divorcing at a phenomenal rate. In the past, marriage dissolutions were never heard of, as compared to the present generation where things are totally different. R1 (first-generation Sikh Ramghria from Kenya) clearly expressed his frustrations and worries:

People are not used to divorce you see, not even heard about it, now it is fashion, you get married now and get divorced the next day.

Sikh Ram-1, Kenya 61

Work and Money

There was always the need for the male respondents to establish themselves economically. Without having any basic education, most of the earlier arrivals had to settle for low-end jobs, which barely paid the minimum wages. Having long and extended families to take care of, they need to work more unsocial hours, because they do not let their partners work as a matter of *izzat*. P2 (first-generation Muslim from Pakistan) explained:

So they go to work 60, 80, or 100 hrs a week, and earn and stand aside from someone who is earning some more; there is competition you see... the women don't; they don't let the women work, it's a matter of pride.

Why pride when you need the money. Pak Mus-3, Azad Kash

Women were never allowed to work because of the common notion of masculinity deeply rooted in conceptions that men are breadwinners and providers for the family. Creed *et al.* (1999) showed that levels of stress varied among religious groups, and that the biggest worries were usually due to unemployment and financial problems. Shams *et al.* (1993) also highlighted the link between stress levels and those being employed and unemployed, with religion playing an important role; as R3 explained:

Think about depression when you don't get jobs, most people work long hours and try and get money for mortgage. Sikh Ram-3, India 61

The sole purpose of migrants' moving from a developing to a developed country is for a better life. As mentioned earlier, most of the older migrants had few or no qualifications at all, due to which they had to work long and extended hours in order to pay for mortgages, as J3 (second-generation Gujarati from UK) explained:

If you buy a house unfortunately they are expensive, they will need a large mortgage, which depends upon your work, and there is work pressure, as you have to work so many... Guj Jain-3, Kenya 40

Work is simply a need for familial survival, which is paying for accommodation, and securing the basics for family life in Britain. However, if some people want to cut down on their hours, it proves to be quite difficult due to the various family commitments and mortgages, and some of them end up feeling like machines:

Before getting work, I used to work long hours morning 5-1400 & then back at 17-2200, it was more like this always as there was overtime and this could be the issue. I work long hours and I sometimes do think that I have a heavy heart, maybe I need to work less, but then the mortgage.

Bang Mus 8, Syleth 64

South Asians are more depressed, have less social support at work, less job control, more effort-reward imbalance, and higher levels of hostility than their White counterparts. According to R6 (first-generation Sikh Ramghria from Kenya), working continuously was a reason for being stressed:

Heart is pumping too much, always working and stress everything and can't cope with it. Sikh Ram-6, Kenya 52

What R6 tried to explain is that just as the human heart works regularly without taking any break, South Asians have always been working long and unsociable hours, which could certainly be a major reason for stress.

Sometimes there is a lot of tension because sometimes there is only work for three to four days or a weekend; but not on regular basis.

Tam Chr-3, Sri Lankan 35

Work was the foremost concern of immigrants as it offered the possibility of enhancing family wealth, economic success, and offered an increase in the symbolic status, which is shared by the South Asian Diaspora worldwide.

God made man, man made money, money made the man mad, it's in our system. We have bigger, extended families and it is all about competition... if I have a Mercedes today, my cousin will work twice (as hard) to get a Mercedes, jealously also in certain communities.

Guj Mus-3, Kenya 49

T1 feels that in some cases they work overtime just to pay for things which are not a necessity. That is why they need to work long and extended hours, as they are trying to fund their luxuries:

I don't need three mobiles, I have taken so many, for that I have to work 11hr shifts. Tam Mud-1, Indian 38

Being Neglected

Out of the 2 million people unemployed in the UK at the time of the research, South Asians make up around 20%. The majority of these are of Pakistani and Bangladeshi origin. I4 and I7 have been unemployed for a few years now. All the participants wanted to work, but when they lost their jobs, they were never given the opportunity to retrain and find work in some other trade; as I7 and I8 highlighted:

Most of us are unskilled workers over here, and when industry closed these *ghoras* didn't pay for their training, how can we improve life?

Bang Mus-7, Syleth 62

They forced all Asians to retire, they are all manual labour, they gave other white people money to learn, but when they went there was no money or skills so there was no training, the industry died, we used to work, and by mid-eighties all week. Bang Mus-4, Syleth 61

Both I7 and I8 highlighted that after losing their jobs in the manufacturing industry, they were never given the opportunity to re-train into other professions, unlike their white colleagues. This frustrated a lot of first-generation migrants, who felt that they

had been neglected and pushed to the brink of being destitute. C3 (first-generation Sikh Khatri from Kenya) also highlighted his frustration:

Jobs, no jobs for us, they don't want us to come up, that is why we are all into business, you see all Asians are becoming taxi drivers and take always because the *ghoras* don't want to, they want easy jobs, so why educate our children to work as cab drivers. Sikh Kathri-3, Kenya 65

Overtime

Critics have argued that migrants do not take away jobs, but instead create jobs and also take the jobs that the locals find menial. South Asians are a hardworking people and are willing to put in the extra hours in order to supplement the lifestyle they want to achieve. Both J1 (second-generation Gujarati Jain from UK) and T1 (new migrant, Tamil from USA) felt that because of the overtime and the need to work more hours, South Asians are much more stressed than the indigenous white community:

If it's the UK people they are very relaxed, they just don't care about anything, and they just work 5 days. Tam Mud-1, India 38

Compared to the South Asians, who are always willing to do overtime and earn extra money...our working and routine etc, we now work all the odd hours, in a short time it may look good, you see but have you noticed that the *ghoras* don't do it. Guj Jain-1, India 45

Money

A common characteristic for most early and new South Asian people, who reside outside their home country, is the desire to make a lot of money. The reasons could be countless, but some of the common ones are supporting family members, maintaining a decent reputation in society, buying real estate back at home, saving money for their daughters' weddings, and helping family members who would like to immigrate to find a source of support and finance. Competition among the earlier migrants is judged by the number of cars and the locations and sizes of their houses. The best way to show one's wealth is to have regular religious functions at home as well as special prayers for each new car. This desire, amongst their own community, to become as wealthy as possible was considered as a greedy characteristic,

but they all feel the need to prove that they can also afford certain luxuries; as B1 (first-generation Sikh Jat from Uganda) and C2 (first-generation Sikh Khatri from Kenya) explained:

I think that the biggest reason for heart problems is money, we all want this money and that's why you see people are so miserable, you see, because he is doing such and such that's why I should be doing such and such. Sikh Jat-1, Uganda 50

It's linked together, you know if you have family problems and financial problems, you really have worries and that's when you have to think, could be primary cause or secondary cause, like the link between your father and mother. Sikh Ram-2, Kenya 64

The move from the traditional Joint Family System to a nuclear system has not only increased the monthly outgoings, but commitments which were shared in the past have to be taken on single handed:

Their other family affairs, they can't keep up with it, they have heart attacks, people with more commitments. Sikh Ram-6, Kenya 52

Whatever they do, family comes first, right from socialization to making money; they always feel it is their responsibility to make money, and help other family members. If they struggle financially, the last option any first-generation participant will choose is to ask their spouses to work, as this is against their principle of respect and manhood, being the duty of every man to provide for his family. However, T6 (new immigrant- Tamil from USA) feels that you have to adjust with the circumstances as pride alone does not help, and goes on to explain:

Here everyone is working, but back home most of the ladies are sitting at home. Tam Mud-6, India 40

Just like most first-generation South Asians, the new immigrants would prefer their spouses not to work (except the Malayalam). However, most of them are more realistic and understand that it is hard to live only on a single income, and they do not feel pressurised to follow the pathways of the pioneering generation where respect and prestige was its pivotal point. Others, like C5 (first-generation Sikh Khatri from

Kenya), believe that there is a close link with the lifestyle and stress, and he explained:

Definitely not digesting properly and that's the reason why heart attack, too much pressure. Sikh Kath-5, Kenya 63

Not only does one feel stressful working long and unsociable hours, but the body itself feels the physiological changes, because of the odd eating hours and deprivation of sleep.

Role Played by Religious Organizations

In Britain, like anywhere else in the world, religious associations are organized on a sectarian or caste basis. Among the migrant population, religion is an important issue. Different places of worship have different criteria and agendas for promoting their faith. These include groups such as a few gurudwaras in Leeds who encourage youngsters/youth to attend language classes, whereas mosques in Leicester provide lessons, usually on Fridays, to promote religious ideologies to young children and adolescents. The last 20-30 years have not only seen huge strides in the religious scenes across UK, but also an exponential rise in the number of religious establishments.

J3 (second-generation Gujarati Jain from UK) highlighted:

I think the exodus to Africa in the 1920, religion got a bit watered down, and then the exodus in the 60s & 70s, and not everyone has maintained their religion...they are born, by name, a Jain, and that doesn't mean that they practise. What happened in the 70s...few Jain came, it was great for them to see another Indian person, never mind Jain, but just another Indian person, together. Until recently, the last 20 years, there weren't enough Jain for a community to be formed (now they do have their own Jain temple). Guj Jain-3, Kenya

Among the first-generation worshipers, there was no sectarian division, as there were very few of them. The change was brought about by the arrival of families to *Beat the Ban*. From worshipping together as one religious, group,

the factions began splitting into smaller groups, based on caste, hometown, language spoken, and wealth.

Mosque

Across the UK, in places like Leeds, Leicester, Birmingham, and Newham, where there are large numbers of South Asian Muslims, several mosques can be found. According to Anwar (1998), there are over 1000 mosques in the UK. Newham council of London, which will be hosting the 2012 Olympic Games, will have the biggest mosque in Europe, with a capacity of around 10,000.

The main principles in the Muslim faith are not to associate anything in the worship of the Creator, to pray 5 times a day, to pay *zakat* (compulsory charity), to fast during the month of Ramadan and to perform the pilgrimage to Makkah once in their lifetime. Most South Asians in Leeds live in or around Roundhay Road or in Beeston. Within these areas there are around 8-10 mosques. One of the participants narrated to the researcher that the Central Mosque in Leeds is usually used by the educated and elite class; the language used is not Urdu, Somali or Sylethi, but Arabic (the universal language of the Middle East). However, I4 and I8 (first-generation Muslim from Bangladesh) felt that not having their own place of worship was highly stressful and demoting:

We don't have our own Bangladeshi place of worship and that is worrying me. I am part of the religious group and we need to make some money. If we can't get our own mosque I will worry as I can't pray 5 times a day, and that could be the reason. Bang Mus-4, Syleth 61

The Kashmiri mosque, they speak in impure language which we don't understand. Our people don't understand the Urdu language, and we built the mosque for communication. Bang Mus-8, Syleth 64

For the others, the issue surrounding worship is not just about language, it is about the competition which is embedded deep within the communities. As with most South Asians, it is a matter of pride or *izzat*:

Imam speaks in Bangla so why not, we tell council that we want, what do English understand. They give us. One is one side and the other side, there is no difference in mosques, our people don't want to walk much so they will try and get to something near to them. That's why we have two and Pakistanis have two If they have, we will have more too... we want something close by. All communities, if you go to the Asian area, will have mosques, local mosques. Bang Mus-1, Syleth 62

More and more communities are establishing their own mosques in Britain. For participants from Bangladesh, this is a stressful process as they view it as a competition to keep in pace with other communities, and also look for loopholes in the council funding. Not all South Asian languages have similar dialects, and worshipping in a common language is not encouraged.

Church

For the Christian migrants, the Church is not only a place of worship, but an institute where they can promote their doctrines, languages and culture. Every Sunday worship is a new challenge, including convincing other churches to rent out their space to the organisation of fund-raising events in order to collect money for the cost of building a new church; as one migrant narrated to the researcher:

The difference between us and the Muslims is, we first ask the race and then religion, where they first ask your religion, and race is secondary.

Some feel let down by the Government because their permanent stay has not yet been finalised in this country. Most of the new Christian migrants assumed that all White people were Christians, and they would understand the stress and hardships that they went through in the Middle East, as M5 explained:

We have only one church for all denominations, so Christians in Kuwait have to suffer, You think over 1,000,000 Christians from Kerala, Tamil Nadu, Karnataka, Pakistan and Syria/Lebanon have to manage on one day (Friday)... so the timings are very tight, you know, prayer start at 4.00am in morning; these Arabs even wanted to destroy even the one we have and we called the American Embassy, and they stopped the demolitions.

Mal Chr-5, India 35

In spite of having only one church, the community learnt how to work in cohesion and were grateful for the small mercies that they received. For example, without the prompt intervention by the American Embassy, they would not have been able to conduct any weekly services and were shocked by the facilities offered to the others, who did value what they got:

When I came here, I was shocked that someone told me that there are 4,000 Mosques you see, paid by the government, and still these people are complaining. Mal Chr-5, India 35

Stress experienced by the new immigrants is linked to the lack of a permanent place of worship. After experiencing a struggle in practicing their religion in the Middle East, they were initially overwhelmed about the prospects of coming to Europe in the belief that all Europeans were Christians. Not only has reality hit them, but they also feel neglected and persecuted in a Western country, which does not support their religious beliefs based on their permanent status.

Gurdwara

The gurdwara is a place of worship for the Sikh community, a religion founded in the sixteenth century by Guru Nanak, who was a Hindu by birth, but hated the caste system controlled by the Brahmins. The Sikhs have a very strict code of conduct and dressing. They are prohibited to eat meat, smoke, drink alcohol and cut their hair. In order to encourage youngsters coming to the gurdwara, the community leaders organise language lessons and dialogue related to their culture and history. However, B7 (first-generation Sikh Jat from Uganda) feels that youngsters are not taking these classes seriously, and goes on to explain:

Here, now we have to write in the entrance that there is no allow of drugs, alcohol and meat, for our youngsters because most of them come to Gurdwara for match-making. Sikh Jat, -7, Uganda 62

The early generation Sikhs have seen a dramatic change in the youngsters, especially when practising their religion. Fewer numbers of them are keeping turbans and beards and following the strict guidelines of not smoking, drinking, and eating meat. Some participants, like B7, view this as a stressful situation, as their religious establishment

is no longer a place taken seriously for worship and devotion, but instead used for dating and other activities.

All Gurdwaras in the UK and across the world serve food in a free kitchen called *langar* throughout the day. In turn, the worshipers help in the cleaning, cooking and serving, as highlighted by C3 and B6:

Not everybody likes the food in the Gurdwara; we need change, different people, and different choices. One might want chapattis in olive oil and someone would want it different, and they have to have different food for the elders, and also for those who are diabetic.

Simple, cut down oil foods in the Gurdwara Sikh.

Sikh Jat-6, Uganda 63

Not only do some participants feel that the food is oily, they would also appreciate the availability of a healthier option. As South Asians are constantly evolving and changing, do the establishments also need to keep pace with society? This change in attitude was witnessed firsthand during the interview, when some volunteers were offering snacks (*pakor*as with spiced tea), not appreciated by some of the participants; as B5 (first-generation Sikh Jat from Uganda) observed:

You are bringing in *pakor*as and milky tea when we are talking about here heart disease.

The Gurudwara is not only used as a place for worship, but also for teaching, dining, as well as politics. Every year there is always a tension that exists between those who would prefer to have alcohol served within the religious compound and those who stick by their religious ideologies.

Maybe we need to add hot water when we have drinks; it's not allowed in the gurdwara compounds. I know that but there is always an issue with the committee, we need funds and they don't let us serve alcohol, and when weddings comes, there is good income to generate, and there is always a fight in the annual year end, last year we have to call police. This is always causing us to have family problems when the auditor tells where the money goes, and this is definitely affecting. You look at all the Gurdwara and you will see that the most heart problems are around April

when the year ending with all these issues. Last year they removed the talvar, what if anything happens? Sikh Kath-3, Kenya 65

“Why are they better than us?”

When we go to Tesco and *halal* shop, we think of money and not quality. If the oil is £2, we will buy it; at the same time the Western people won't buy it, they will buy quality ones and more expensive.

Tam Mud-1, India 38

South Asians were more likely to be married, have bigger families, and attend a place of worship regularly. Europeans, on the other hand, saw more friends on a regular basis and those with bigger social networks were less likely to smoke than those with smaller ones; as G3 (first-generation Gujarati Muslim) explained:

A Indian doctor once said: curry, worry, hurry... Whites do have curries and they don't worry and a lot of them are not in a hurry... they have this habit of getting to work from 9 to 5 and if you tell them do another half an hour more they won't do it... but our people are money and only money.

Guj Mus-3, Kenya 49

South Asians fill up job vacancies that the white indigenous people do not want. These jobs are laborious and poorly paid, as S2 (new immigrant- Tamil from Sri Lankan) explained:

We have to survive with £150; we have so much pressure, we have to survive with one week, and they make in one hour for survey, it's a bit difficult. Tam Chr-2, Sri Lanka 35

According to S2, “they” (whites) have to work fewer hours to earn the same amount of money most immigrants will make in a whole day's work. He says: “If we compare with them, we have so much of pressure with one week wages, and they do it in one day”.

Family and Kids

The early as well as late South Asian immigrants in the study felt that the white community lived a much better life than they did, as highlighted below:

You asked me why I think that the White community have fewer heart attacks? I tell you why; because they have no worries; man comes from work... takes his bottle and sits with the television, doesn't care where his wife and kids are. Guj Mus-4, Kenya 62

I am telling you, if his wife dances in the club he doesn't care; and wont you ask your wife if she comes at 22.00, wont you ask her?... the white person won't. Guj Mus-2, Kenya 55

If it was an English man, and if he comes to know that his daughter is having an affair with another person and his child is involved in crime, they won't be sad as we would be in the same situation.

Guj Loh-1, Kenya 56

What they know is go to the bar and enjoy themselves, and nothing to do with the children's future. Tam Mud-6, India 40

The common understanding among most of the participants, both newer and older, is that the indigenous community experiences less stress than the immigrants because they do not care about their wives and daughters as much as they do. This is something the South Asian participants would agree with, because worrying constantly about friends and family drains an individual psychologically and contributes towards CHD.

Wages and Overtime

South Asians tend to work more than the stipulated 37.5 hours per week, as they have larger families and the amount of money earned in a month is in some cases less than what the native people would earn. The only way to supplement their income is working more hours, as J1 and T1 explained:

If it's the UK people, they are very relaxed, they just don't care about anything, and they just work 5 days. Tam Mud-1, India 38

Just to maintain this lifestyle, for the Whites it is easy, as they get easy jobs like if they come and survey the building they get £150, but for us to get that money we have to work for 3-4 days. If we compare with them, we have so much of pressure with one week wages and they do it in one day. We have to survive with £150; we have so much pressure, we have to survive with one week and they make in one hr for survey, it's a bit difficult. Tam Chr-2, Sri Lanka 35

Compared to South Asians, who are always willing to do overtime and earn extra money; our working and routine etc, we now work all the odd hours, in short time it may look good, you see, but have you noticed that the *ghoras* don't do it? Guj Jain-1, India 45

Providing for the family is a core responsibility that South Asians inherit from their parents. They also feel that they shoulder much more responsibility than the native people, which is also one of the reasons to be stressed.

Holidays and vacations

As most South Asians are working extra hours to pay for their mortgages, they feel that the whites are downsizing their houses and travelling the world with the extra income. When they do get paid holidays, the South Asians tend to work other jobs in order to make extra money, as T2, C2 & T4 explain:

They make money and spend it and we want to make and save it.

Tam Mud-2, India 39

They are all downsizing their houses, and all they do is take a cruise, which is good for the heart; travel in the sun and the sea water/climate...

Sikh Kath-2, Kenya 65

Hardly have we taken any vacation. Tam Mud-4, India

Better sex life

Sex education and talking about sex has always been a taboo amongst South Asians. One of the stereotypical views is explained by J3 (first-generation Gujarati Jain from UK) as follows:

Like one GP said, we have less sex than the whites and that could be the cause. I know my neighbour had three kids from different partners, when I think of them there is no stress, as they live like the jungle you see, have sex with any partner and have kids as they come by; God has given a brain.

Sometimes we are weak and there is tension; main thing is family structure, different in Asians, and Whites, they have sex with any one you see, and release their tension. Pak Mus-5, Azad Kash 66

6b. Conventional Risk factors

Smoking

According to the Fourth National Survey, half of all Bangladeshis, one-third of all Pakistanis, and one-fifth of all Indian men smoked. Bangladeshi men were most likely to be current smokers. However, Table 5.3 in the previous chapter clearly highlighted that not all Sylheti speaking men smoked. 5/8 Bangladeshi men only chewed tobacco, and 2 men had stopped smoking all together. 12/13 Pakistani men smoked, 2/6 Hindu Tamils, and in this study, all Gujarati Muslim men smoked. In contrast, none of the Sikh, Jain or the Christian participants smoked. There were also a few exceptions like the East African Gujarati, who chewed tobacco with *paan* (11/14). Participants in the study were first asked whether or not they smoked, what type of products they smoked, and whether they tried to cut down and give up smoking, and those who did not smoke were asked if they ever did and why had they given up.

Health beliefs - smoking

Amongst the participants in the study, awareness of the dangers and risks involved with smoking varied between groups, based on religious and cultural upbringing. Smoking is a taboo among Sikhs, but widely accepted by the Muslim cohort. All the new immigrants (M, S & T) had smoked in the past, and for various reasons, most of them gave up after immigrating to the UK. *Paan* was consumed in different ways; sweet paan as a mouth freshener, which was also popular in weddings as compared to the other version, which consisted of betel nut/quid, *sopari*, *tulsi*, and limestone.

Some of the Gujarati participants from Leicester had strong personal views about smoking. J1 (second-generation Jain from UK), who works for the NHS as a pharmacist, never smoked in his entire life, because of personal preference; it did not appeal to him, and he knew about the dangers of smoking and did not like it as a habit:

We are not supposed to smoke it is also not a good habit also.

Guj Jai-1, Kenya 45

L3 (first-generation Gujarati Lohana from Tanzania) also agreed to what J1 had to say, and went further to link it with passive smoking and was against smoking in common places, explaining the effect it has on non-smokers:

I think it definitely affects a person; I think it damages the lungs, and it needs to be banned in public places. Even those who don't smoke they are indirectly smoking by just sitting there. Guj Loh-3, Tanzania 45

R6 (first-generation Sikh Ramghria from Kenya) does not understand the reason for an increase in the risk of CHD within his community:

When they don't smoke, and when they say heart disease is by smoking; it's not in our religion or even in our families. Sikh Ram-6, Kenya 52

Both R2 and B5 unanimously agreed that the younger generation is in the process of developing bad habits, and believe that they are not following the right religious principles:

Maybe, probably youngsters nowadays, I can tell you of my experience and time; it was not popular. Sikh Ram-2, Kenya 64

Though smoking is banned according to the Sikh religion, the first-generation participants are accepting the fact that youngsters have changed and are being influenced by the Western culture. Others, like C4 (first-generation Sikh Khatri from Kenya), still have faith in their youngsters:

No smoking; Sikh don't smoke, but maybe passive smoking when youngsters go out Friday, the *ghoras* (Caucasians) smoke and they get ill.

Sikh Kath-4, Kenya 64

C4 believes that the youth are being labelled as smokers, as they go out with peers who smoke and have additional negative influences on them. Among the Muslim participants, I8 (first-generation from Bangladesh) had a more philosophical outlook; he did understand the risk posed by smoking, but felt that life is too short to worry:

I am really appreciating anyone who no smoke, but I enjoy it... anyway we will die and I have not committed sin, why should I stop, I smoke 20-30... Bang Mus-8, Sy leth 64

“Now the government is saying different”

Most of the Pakistani participants totally disagreed that smoking is a major cause of heart disease. P2 (first-generation from Pakistan) could not understand why there is such a change in the government’s attitude towards smoking, when only a few years ago people could smoke openly.

Who put people to smoking? It was Government; they never thought it will be the biggest killer in the future Pak Mus-2, Azad Kash53

In spite of public health evidence that smoking causes cancer and heart disease, P6 and P11 (first-generation Pakistani) feel that the government did little to discourage people from smoking.

I don’t understand that there wasn’t much evidence before they wanted to promote cigarettes...you see everywhere the post office everywhere there are advertisements, everywhere... there were some in the army and getting 3 packets a day... ask that gentleman... ask him... do you get free cigs?

Pak Mus-6, Azad Kash-51

It is stress; it is very strong as the doctor says that smoking is biggest killer. If you go back 40-50 years during world war, government was promoting cigarettes to the army, giving people free; it was the Government and now Government is saying different.

Pak Mus-11, Azad Kash 61

P6 and P11 (both first-generation from Pakistan) highlighted that in spite of all the public health awareness from around the world, smoking was not banned and

advertisements were everywhere. According to them, one of the perks of working in the armed forces was that cigarettes were handed out for free.

Family & Friends

Some of the participants did not believe that there is a link between smoking and heart disease, as they have friends and family who have smoked all their lives and are still alive and well; as P8 (first-generation from Pakistan) explained:

Smoking is the main cause of heart disease; I don't think it is right. My relative, you know is 95 and heavy smokers, and still alive you know, and he is smoking all through his life. Pak Mus-8, Azad Kash 44

People do tend to age faster with smoking, but L1 (first-generation Gujarati Lohana from Tanzania) feels that in spite of his father smoking for many years, he still looks quite young.

My father is 82, looking at him you will never say he is 82, and he has been smoking for 72 years. Guj Loh-1, Tanzania 48

Knowing someone who never smoked, but suffering from heart-related illnesses, makes participants like G2 (first-generation Gujarati Muslim from Kenya) a bit sceptical about the link between CHD and smoking. He goes on to explain why:

It's not that, it could be one of the factors but not like everyone says smoke and hear everyone will die... definitely not, I have seen people who have not smoked in their lives, but they still have heart disease.

Guj Mus-2, Kenya

Compensate one for another

The lay understanding of the participants regarding smoking varied between groups, but most of the Muslim participants were strongly in favour of smoking. They did not see it as a risk factor for CHD as long as they compensated their actions by either healthy eating or physical activity. By keeping oneself fit, P11 (first-generation Muslim from Pakistan) believes that you can still smoke, with no possible risk of heart disease:

If we exercise everyday then you can smoke and do anything.

Pak Mus-11, Azad Kash 61

I smoked for 40 years and nothing happens to me; you have to eat or smoke the right product and nothing will happen. Bang Mus-5, Syleth 58

Having read somewhere that as long as the person is fit, he has no problem, G4 (first-generation Gujarati Muslim from Kenya) went on to justify how cigarettes play an important role in burning fats:

No, no link. In American one famous university has said that they won't have heart problems and that's true if he doesn't do exercise, but not cigarettes... cigarettes in fact burns the fat and finishes the fat, and in that way doesn't affect the heart. Guj Mus-4, Kenya 62

Smokeless Tobacco

Smokeless tobacco, such as chewing of paan with tobacco, is common among certain South Asian groups. Bangladeshi participants in the study used paan frequently, compared to the others who only chewed it occasionally, either in weddings or as a festive treat. They preferred to eat sweet paan as a mouth freshener as it does not contain tobacco, and they felt that it was good for their health. Some of the participants did not like to try them, as they were aware of the risks of cancer and the possibility of heart-related illnesses. I1 (first-generation Muslim from Bangladesh) enjoyed it so much that he finds it hard to give up and goes on to explain:

Paan, everyone eats it and it's a little bit, it's hard to give up, it's a nice mouth freshener. Bang Mus-1, Syleth 62

Certain habits are hard to get rid of, especially when there are family members who in spite of eating it for many years, do not seem to be affected by it in any way. G2, an East African Asian, does not see any link between CHD and paan:

My dad eat paan from the age of 5 and now he eats he is 75, and eats around 10-12 a day. Guj Mus-2, Kenya 55

I4 (first-generation Muslim from Bangladesh) justified eating paan because he is not smoking, and finds it extremely hard to change his habit as he has been doing it for more than half his life.

We no smoke, we eat so why heart... I enjoy paan, I can't give up, and I have been eating pan for 45 years and no problem for me.

Bang Mus-4, Syleth 61

The famous campaign to promote consumption of five portions of fruits or vegetables a day and a healthy diet left a deep impression on participants. Zarda paan ("tobacco paan") consists of a green leaf, betel nut or quid, spice, *chunna* (limestone used as paste) and tobacco. By eating more greens, I6 feels that he is doing exactly what the government recommended. He also feels that the quality of the *beedis* (home-rolled cigarettes) being imported is poor and could have an impact on the heart.

One side they say eat green and then when you eat green they are now saying it's bad for you. Most here are on and off, now it's hard because the supply of *Beedis* is problem now so we are getting bad quality ones coming in. Bang Mus-6, Syleth 59

Health Behaviour - Smoking

Most of the new immigrants initially smoked, and made changes once they came to the UK. The majority of them tried to give up or smoked occasionally with friends. Reasons to give up or wanting to give up smoking are as follows: cost of cigarettes, role played by corner shops, familial and spousal pressure, and cultural and religious aspects. M2 (new immigrant, Christian from UAE) felt the need to give up smoking as he was shocked by the price, but feels that for those who still want to smoke, the lure of cheaper cigarettes abroad is very tempting.

Cost of £5, very costly. I don't believe it here, outside one pack £5; in duty-free, whole block £10. That's why everyone gets from abroad.

Mal Chr-2, India 35

Most of the new immigrants made every effort in either giving up or working towards giving up smoking. All adjusted well to their newly adopted country. Due to the new legislation and smoking bans across numerous work places, some of them felt pressured to quit. M4 was pressurised by his partner and openly admitted it, as

compared to T1 (new immigrant, Tamil speaking from USA) who wanted to change after marriage, when his spouse requested him:

I stopped just after marriage; my wife asked me to stop so I stopped.

Tam Mud-1, India 38

M1 (new immigrant, Malayalam from Middle East), like most young men, tried smoking and did not see any benefits from it. As compared to M4 & T1, he himself stopped smoking, back in India:

I stopped because I didn't like the smell; not good for the body, immediately after smoke I feel exhausted and tired, so I gave it up. Definitely not price factor that I stopped from India, not after coming from here. Mal Chr-1, UAE 35

After trying physical fitness exercises, M3 (new immigrant, Malayalam speaking from Middle East) realised how badly smoking had affected his body:

My father teaches yoga and I also used to do that; when you do that you can't drink or smoke and that will affect you badly. Mal Chr-3, India 36

Some used it as a coping mechanism against stress; as G2 (first-generation Gujarati Muslim) explained:

I can never leave smoking, I have tried a few times and I have tried in the past and then I will go back in 2 days and goes on to agree that there could be some connection, but without self-determination for something which he is habituated for the last 4 decades. Smoking may be... I need to have the will power... I have been doing it for the last 40 years.

Guj Mus-2, Kenya 55

In contrast, G2 (first-generation Gujarati Muslim from Kenya) said he was asked by his doctor to start smoking again because his health started deteriorating, and he goes on to explain why:

Yeah, the doctor say me put so much of weight that he was concerned you are putting so much weight that it will affect my heart, I cut down and then the doctor told me smoke again. I was always angry at the kids and then the GP told me to start smoking again. Guj Mus-2, Kenya 55

Amongst the Muslim participants, most try and give up smoking during the holy month of *Ramadan*; as G2 (first-generation Gujarati Muslim) explained:

The whites set January 1 as new resolution; we try and make the holy month as to what we can change.

He also believes in divine intervention, but feels helpless and out of control as soon as the fasting ends:

Ramadan time, it's natural, why it happens I don't know at 5 am I start my fast and have my last cigarettes before I start my fast... the whole day I am perfect and when evening comes and you have had your fast broken I can smoke around 5-6, around 10 in one time.

Diet

Diet among South Asians varies from community to community and from strict vegetarian to meat and fish containing diets. Though dietary fats consumed by South Asians are similar to those used amongst the white population, there tends to be an increase in linoleic acids, due to the amount of oil used. Studies have also highlighted that those consuming a vegetarian diet have a low intake of vitamin B12, which plays an important role in the elevation of plasma homocysteine concentration.

Health Beliefs - Diet

Diet plays a very important role within South Asian communities; the type of food eaten within a community depends on the country of origin, religious up-bringing, affordability, beliefs and dietary needs. For most of the older migrants, food shopping is done by men and cooking by women; in contrast, for newer migrants, shopping and cooking duties are shared between both genders as most of their spouses work. Most of the participants originating from Pakistan and north-western India eat chapattis, compared to Bangladeshi and newer migrants who have rice as their staple diet. All Muslim participants in the study ate only chicken and the meat of animals with cloven hooves, slaughtered according to the Islamic custom. This contrasts with most of the Punjabis and Gujaratis, who were vegetarians, and believed that their diet alone makes them impervious to heart-related illnesses.

Participants' food habits

As mentioned earlier, food habits vary among South Asian groups. The lay understanding among vegetarian participants was that abstinence from meat eliminates the risk of CHD completely. As explained by B2 & B7 (first-generation Sikh Jat from Uganda):

90% don't take meat and that's why they don't suffer the problems, they always have other problems and not the vegetarians.

Sikh Jat-2, Uganda 48

But for Hindus, the cow is a sacred animal and their habits also vary according to the caste they belong to and place of origin, as E3 summed up:

Asian people especially Hindus their culture are different, Europeans are different Guj Mix-3, East Africa 61

Some new migrants have stereotypical views about other communities, especially Sikhs, as T6 (new immigrant Tamil speaking from US) explained:

When they (Punjabis) cook vegetables then also they use the ghee (in) dhal (lentil soup). Tam Mud-6, Indian 40

It was extremely difficult for participants to change their traditional dietary habits because of their religious beliefs. Although they did believe that being vegetarian contributed to good health, they lacked the understanding that deficiency of B12 exasperated the risk of CHD.

Government's role

Most of the participants in the study felt that they were neglected by the Government. South Asians have been extensively researched, but results and findings are never filtered down to the layman, as C1 (first-generation Sikh Khatri from Kenya) explained:

Nobody... nobody or somebody like you will come and tell us or care to ask us what we think our food. Sikh Kath-1, Kenya 63

C3 (first-generation Sikh Kathri from Kenya) explained with pride:

Food is the same and the government is mentioning that the grease (fat) is more in our food, why they are finding out now, no one asked earlier; curry is the food of Britain and not fish and chips, you know.

Sikh Khatri-3, Kenya 65

B2 (Sikh, Jat from Uganda) was also suspicious of the government's motives, which, he felt, should have manifested 20 years ago. According to him, it is too little too late for them now, as they are getting older:

Diet problem is not started today, over 20 years now, that time we didn't have time, were busy with work, no one bothered about us, how come the *ghoras* are worries now, *dhal mein kuch khal*, [proverb- "there is something in my lentil soup"] I know them for long.

Sikh Jat-2, Uganda 65

Some of the participants also felt that their children were in greater need of advice for a healthier lifestyle because they were on a Westernized diet, rather than traditional foods. As E2 (first-generation Gujrati from East Africa) explained:

With junk food like fish and chips and noodles and all that pasta and all they don't like Indian food, do you think they are healthier than their parents? Guj Mixed-2, East Africa 64

C4 (Kathri) from Kenya felt that retailers such as Tesco were concentrating more on the wider white community by having foods with colour coding Traffic Lights, where red is for high amounts of sugar/saturated fats and green is healthier; most South Asians across Britain buy their food from local/corner shops and the imported food bought from these shops does not have proper labelling. C4 commented:

We don't know what is carbohydrate and what all that is, yes fat we know and all this protein, it will be nice not only in English food but also in our food to have a detailed label so that a lay man can understand.

Sikh Kathri-4, Kenya 64

It is difficult for a layman to understand health labels, especially if they do not know what they are looking for. E2 (first-generation Gujrathi from East Africa) justified this:

We don't look at health labels; our foods don't have any, we are never advised on what is good and risky to eat Guj Mix-2, East Africa 64

When the type of oil used is put under consideration, C1 (first-generation Sikh Kathri from Kenya) particularly felt that the Government could do much more by having stricter guidelines:

Ghee is suited in hot countries; I feel Government needs to label all Asian food and make strict code on fat/saturated fat. Sikh Kath-1, Kenya 60

For most of the newer migrants, eating traditional food was not a priority, and they were willing to experiment with foods. This group prefers supermarkets more than the local corner shop due the assurance in quality, as compared to the old migrants who prefer the traditional shops:

When we buy a product (here) its crystal clear the amount of product has salt, sugar etc., in our place (India) it is packed and other things are not there, they will open some tin and some oil, we won't know what is the mix in it, what is the adulteration in it and how far is good.

Tam Mud-4, India 36

The change in the government's stance on imported products , that is, demanding them to be of the highest quality and purity, has its side effects, as J1 & J2 (first-generation Gujrathi Jains from UK) explained:

But it's mixed and adulterated, here (in the UK) it's pure so the effect is more/ (spice), it's the *malavats* (adulterations that the body is used to).

Guj Jain-2, UK 42

They are pure ingredients and we are not using them properly and also the amount and you don't know where it comes from....I fully agree with the *masala*, it could be the major reason, here the *masalas* are too pure.

Guj Jain-3

Both J2 & J3 felt that pure ingredients that have a high concentration of spices were harmful to the body. Being vegetarian, R4 (first-generation Sikh Ramgahria from Kenya) felt that:

Butter is vegetarian, purely vegetarian and that is good for you.

Sikh Ram-6, Kenya 58

C4 (first-generation Sikh Kathri from Kenya), a car mechanic by trade, also believed that the fat they consumed was essential for daily functioning:

They say don't eat grease, but without grease how can you run smooth, you need good butter to run like a good car. Sikh Kathri-4, Kenya 64

Among the Gujaratis. L4 (first-generation Gujaratis Lohana from Tanzania) also felt that there has been a lot of bad press about South Asian foods as compared to what white people eat. He explained:

When it comes to eating, they mention that we have to cut down on eating oil/ salt, don't eat fatty food, don't eat *samosas* and because of that you won't have any problems... but what about the whites who eat chips and they have quite a lot and if you see McDonalds, KFC you will see that they eat quite a lot and you will notice that they are having more problems than us, but they keep telling us not to have things that are fried or not eat that etc. Guj Loh-4, Tanzania 62

Most of the first- and second-generation participants in the study felt that there was a lack of support from the government in all aspects of their lives, especially with respect to their diet. Most of them were used to traditional diets and were never advised on alternative foods or cooking patterns. Most of the participants did not understand the difference between saturated and polyunsaturated fats and how to read labels.

Post migration, the food choices

The older migrants find it hard to understand why the youngsters are eating Westernized foods like fish and chips, donna kebabs and pizzas, as opposed to their traditional food. Some believe it is because of fast foods' easy availability and affordability that the traditional way of cooking is being sidelined. As L2 (first-generation Gujarati Lohana from Tanzania) explained:

I think because we eat a lot of processed food Guj Loh-2, Tanzania 48

L2 felt that traditional cooking takes a lot of time and the easier option of making ready-made meals using microwave and could be a cause of CHD. Some of the older migrants believe the increase in heart-related disease could be due to the timing of one's meals, as E4 (first-generation Gujaratis from East Africa) explained:

They eat and go to bed. Guj Mix-4, East Africa 58

Eating together as a family unit is still very important, as they eat their meals after the news bulletin; this is often the only hot meal they have. But for the new migrants the most important aspect to their food choice is quality, food labelling and convenience. As most of their spouses work, they have started making changes in their diet and the best option they found was ready-made food as T5 (new immigrant Tamil from USA) explained:

I like Indian food only, but after coming here I have to compromise in such a way, more into ready-made foods. Tam Mud-5, India 39

The whole concept of eating food ready in minutes is something new for most of them, as M1 (new Malayalam-speaking immigrant from Middle East) noted:

You get ready to cook with ready cook meat, so when you come in evenings you have no time and even use the microwave.

Mal Chr-1, Middle East 37

Most of the M participants are newly married and very few of them have children. With their wives on shift duty, cooking in large quantity is not feasible:

You don't need to cook here and all instant, you can get ready made.

Mal Chr-2, Middle East 3

Lack of proper sleep and exercise

When I came home I had a big meal and what it is that after eating I straight away went for a shower, I had a Coke which I think triggered with the big meal. Pak Mus-3, Azad Kashmir 36

This incident has prompted him to change his lifestyle totally:

Completely different you know I used to eat deep fried stuff and I have stopped now, we use olive oil now and use less oil and also less salt, before we used to never think of all these things and when it happens.... It all comes at one time for me it's in the family, you see.

Pak Mus-3, Azad Kash 36

Some have made drastic changes to their lives. Though they had migrated many years ago, they still find it hard to eat only sandwiches; for most South Asians this is more like a high tea than a proper meal:

We won't eat anything the whole day and may be just eating a sandwich and tea/coffee and when you come home and you are so hungry you eat loads Guj Mix-1, East Africa 62

The Jain religion is particularly rigorous in dietary matters; for example, it does not permit eating foods grown under the soil. A health related background gives a better understanding as to why the Jain religion advises people not to eat late at night:

Well if you ask people who are in medical side... They will tell you they have an early meal. In my house the kitchen closes by 1900, very rare it's late and that the reason is that we know it won't digest.... In the past we were not knowledgeable but things have changed now... in the past we couldn't afford a lot of things and the climate was also different... as a Jain we know we have to eat before sunset initially we thought it was religious and when you implement it then you come to know that there are also health benefits. Guj Jain -3, Kenya 40

Though some are not happy to lose their only hot meal of the day, they know they have to make changes:

It's better to eat less at night, the problem is that in Dar Es Salaam main meal was in the afternoon and light in the night, here it is the opposite, we are not used to that, so either you eat a bit early or less.

Guj Mix -5, East Africa 54

The difference between the new and older immigrants was apparent in their meal timings; new immigrants preferred to eat late at night, as some of them worked shift duties as compared to older immigrants who preferred having their main meal in the afternoon.

Eating meat

Only the Christian participants in the study mentioned eating pork; Punjabis and Gujarati Hindus are mostly vegetarian meanwhile alcohol and pork are totally restricted in Islam and enquiring about such matters presents the risk of offending Muslims.

Only P11 (first-generation Pakistani Muslim) spoke of pork as he could not understand why the Asian diet was considered a bad one:

You see the fats what the English eat is different from the Asian fat, English eat pork fat which is very dangerous... so why they are saying that Asians eat more fat? Pak Mus-11, Azad Kash 58

Some of the participants, who were devoted Muslims, expressed fears of illegal practises from back home that have started appearing in UK too and expressed the need for local councils to do more in eradicating such a menace, as I4 (first-generation Muslim Bangladeshi) highlighted:

I feel the chicken is injected with water, I am not sure when you cook it, there will much of water coming, here I am worried that what water they use in injecting, it's all cheating here. Bang Mus-4, Syleth 61

Among Tamil-speaking participants, there were similar views on linking meat to CHD. S3 (new immigrant Tamil from Sri Lanka) believed that he was doing the right thing by eating more pork because of campaigns mentioning that white meat is better than red:

They say in white meat there is less fat, pork (white meat) has less fat and mutton more, lamb okay, mutton more fat. Tam Chr-3, Sri-Lanka 35

T4 (new immigrant Tamil from USA) believed that by excessively eating red meat you stand a risk of CHD:

If you eat too much mutton (meat) or whatever Tam Mud-4, Indian 36

Cooking

Traditional Indian cooking is considered tasty and suitable for all palates, but it also depends on how people cook it, as I6 (first-generation Muslim from Bangladesh) explained:

I think fatty foods, and not healthy food... all Asians eats fatty foods and we have more oils in our foods and ghee and oil and pagodas.

Bang Mus 6, Syleth 58

Cuisines of India can be divided into Northern, Southern, Bengali and Maharashtrian, each having its distinct style and taste. Northern Punjabi cuisines are mostly curry-based with the liberal use of desi ghee, butter and milk, and the food is tailor-made for people who work in fields and burn out a substantial amount of calories. Most South Asians originate from countries that have tropical climates, and their foods are thus adapted to their lifestyle and work ethic. However, after migrating to a more affluent Western world, food consumption increases because of easy affordability and availability, but physical activity becomes much more seldom. Cars, for example, are more affordable in the Western world, as C13 (first-generation Sikh Kathri from Kenya) pointed out:

What food we used to eat before were for the hot climate and now it is cold climate, you see if you put food in fridge there is grease and they will get all fat will be there and same way when you put fat food in our pipe there is block. Sikh Kath 13, Kenya 64

Some participants considered the South Asian way of cooking unhealthy:

Asian people die from heart attack because of how they cook the food, cooking style. Tam Mud-4, Indian 36

Everyone eats the same food in the world (fats, carbohydrates, proteins), but the way that you cook is different. Sikh Kath-3, Kenya

The wives of most of the older migrants do not work, and consequently they spend a substantial amount of time in the kitchen during the day. A normal South Asian meal consists of chapattis/rice, *dhal*, *sabji* (side dish, a minimum of two helpings in case of

those who eat meat) and curd. Making all of these from scratch takes considerable time. Though they might be aware of the health implications, that awareness invariably does not stop this practice:

Everybody knows it, but when you cook several dishes at home it is not practical....the English have one dish/ we have a min of five per time, there is usually one fish, one chicken, one sabji, one dhal.

Bang Mus-5, Syleth 58

Cooking multiple dishes is common practice. For some, it's only the spare time during a weekend that allows them to maintain their tradition as M1 (new immigrant-Malayalam from Middle East) explained:

Our cooking is too much of variety and we don't get a chance to eat everything. Mal Chr-1, India 37

M1 further commented on the type of onions used (red or white). He used to cook in red onions back home and believes the availability of only white onions is a negative factor in his diet, as it absorbs more oil:

Nowadays we use 1kg almost for each dish. For example we make chicken curry; we make masala in oil, so the onions we cut and put in the oil, the onions suck too much oil. Mal Chr-1, Indian 37

Eating *masala* regularly could have an effect in the digestive tract. Most of the participants also talked a great deal about the “*Indianized*” way of cooking. While others have started getting used to the milder version created especially for the Western palates as I8 (second-generation Bangladeshi) explained:

Spice is the one of the main cause for heart problems, as we do eat a lot of spicy food, but if you go to a more traditional house, I can't normally eat in people house, in our house we cut down on spice so much that and when we go to house you know we regularly go for some reason or the other weddings/ parties we can't tolerate as they do it the traditional way and then I do get a lot of smoke problems which I don't get in my house when I eat why I smoke out I don't know and they I feel down, people I know they use of spice/chilli. Bang Mus-8, Sylethi 36

Both M3 and M2 (new immigrants-Malayalam from Middle East) also felt that the ingredients and the amount of spices used in making a dish could be a contributing factor to heart disease. Having accepted that fact, they are still not willing to compromise on their palate:

Too much spice and lot of spice and it will affect anyways with the extra taste Mal Chr-3, India 36

Indian food we go for taste any where you know these masala are very harmful for body, but we like the taste. Mal Chr-2, India 35

Both the new and old immigrants felt that the amount of spice used is the cause of coronary heart disease. Both T4 (new immigrant Hindu Tamil) & L7 (first-generation Hindu Gujrathi) felt that there is a link between the amount of oil used and the food consumed. The tastier and spicier the food is, the more people will consume it; ‘anything that has taste good has got cholesterol,’ noted one of the researchers’ friends who is training to be a GP. Participants also spoke on the issue:

We eat more spicy and oily food. Guj Loh-7, Tanzania 58 & 38

They use a lot of oil (taste) and no control on the intake (rice).

Tam Mud-4, India 36

B3 (first-generation Sikh Jat from Uganda) believes that added to the health hazards is the stress that comes with it:

It’s the food that is heavy and that is the tension also.

Sikh Jat-3, Uganda 60 On the same subject, B6 opines:

Especially with the Punjabis as we are used to taking heavy food

Sikh Jat 6, Uganda 64

But B6 (first-generation Sikh Jat from Uganda) believes this is because of the re-use of cooking oil:

Asian people take a lot of grease (fat), the grease (fat) we take is burnt grease and that has an adverse effect on the grease system.

Sikh Jat-6, Uganda 64

The kind of oil used in cooking varies between groups. Christians preferred coconut oil for its taste and did not seem to worry about the saturated fat content. Punjabi speaking participants preferred butter and ghee to other cooking oils, as the taste was a very crucial element. For the Muslim participants, any oil except olive was preferable. Some of the Hindu participants preferred using rapeseed or linseed oil as it is a substitute for fish oil. Ghee was the choice of Sikh participants. Individually speaking, C1 (first-generation Sikh Kathri from Kenya) preferred ghee because of its taste; B3 (first-generation Sikh Jat from Kenya) made the same choice but only because ghee is a home-made product, more natural and contains less preservative, thereby, making it a healthy product.

The food what we have is very rich and we like our ghee.

Sikh Kath-1, Kenya 60

We eat home-made ghee. Sikh Jat-3, Uganda 63

The popular belief dictates that anything made with natural ingredients is good; but ghee has a very high content of saturated fat and even the lay understanding of participants, like B3, reflects his awareness of this fact. On the other hand, L4 (first-generation Gujrathi Lohana from Tanzania) had a more scientific outlook and explained with an example:

By eating oil your arteries are getting blocked for example, if you put water in drain and put oil also in it. Guj Loh-4, Tanzania 62

Most of the new South Asian immigrants are from the Southern part of the Indian sub-continent where coconut and coconut oil is used extensively for cooking, massage and as hair oil. S3 (new immigrant-Tamil Sri-Lanka) highlighted:

Most of us usually cook food in coconut oil. Tam Chr-1, Sri-Lanka36

Lack of information about the availability of other cooking oils and its benefits could also be the reason as to why people still continue using coconut oil. They might come to know about other oils until very late in their lives, which makes it hard to change practices as traditional dishes are considered to be tasty and most people are resistant to a massive change in diet:

We don't know the difference between sunflower oil and olive oil, ground nut oil or vegetable oil; when my mother came to know the difference she was 50, then she said, 'Oh this oil is good for health.' My mother is not educated and so that could be an issue. Tam Mud-1, Indian 38

He doesn't know which oil contains more fat. Tam Mud-1, Indian 38

Recently, a lot of interest has been shown in experimenting with different oils as some of the participants were aware of the health campaigns promoting olive oil; the main reason they did not approve of it in their own kitchens is that:

It doesn't go with our food. Mal Chr-1, Indian 3

For others like I7, the whole concept of using olive oil was different:

We use olive oil for body massage, it gives better colour to the skin and the skin is soft, and we use it for dry skin and all those things; it makes the babies and girls fairer. Bang Mus-7, Syleth 62

In contrast, second generation J3 was happy experimenting with new oils, because of the health benefits associated with it:

We use linseed oil. I read somewhere its good for the *Dil*, but Japanese live on fish and live to over 100. Guj Jain-3, Kenya 45

Participants like L1 also knew about the benefits of fish oil. As vegetarians, some participants preferred the capsule form, but those who are very staunch vegetarians like himself preferred the alternative:

Fish oil is very good for the heart, I have tried 7 seas, its didn't suit me, I still remember there is an alternative for Vegetarians its rapeseed oil, it's the same as fish oil. Guj Loh-1, Tanzania 56

A lot of South Asian cuisine is dairy based. Though the option of three different colour coded types of milk is available, most of the older participants preferred the full fat version as it had better taste, and also, value for money. The older immigrants are used to the diet from back home which is not suitable for the colder hemisphere. In olden days, they used to toil in the fields and burn a substantial part of the calories. After migrating to the UK, they still maintain that they can eat anything as long as they can sweat:

You work hard and sweat and that helps you to digest.

Sikh Ram-2, Kenya 64

For some of the new/old migrants, eating meat especially lamb was a delicacy in the past but easily affordable now, and in some cases even cheaper than vegetables; this could be the reason as to why they eat meat daily which was clearly highlighted by I1 (first-generation Muslim from Bangladesh):

To be honest, I eat red meat (more) than I am supposed to; we eat red meat every single day, the difference is that vegetable is cooked with the curry, so all vitamin goes, not many people like vegetables as we all like meat, may be a little bit (eat). Bang Mus -1, Syleth 62

Karma and Dharma

For the Hindu participants, belief in God and the concept of *dharma* has led some of them to assume that their health would be taken care of as long as they did the right thing in this life. Good health has been correlated to goodness, not lifestyle. In spite of following the right path, if an illness occurred, it was considered their *karma*, something beyond their control as a consequence of their wrong deeds in their previous birth. Most of the E (first-generation Gujarati from East Africa) participants believed in some connection either with their food, planets, gravitational pull, and superstition as L1 believes:

Its usually with people in the age group of 40-50, who are more relaxed and all they want to do is spend times in the temples etc, Hindu mentality is that we are all going to die so what difference.

For E5 (first-generation Gujarati from Kenya):

Cholesterol levels also obey *karma*, we don't have control on our levels, that's what we are born with and continued to also believe that there was a link. I think it is by meteors falling from the sky.

Guj Mix-5, East Africa 54

E2 (first-generation Gujrathi from East Africa), believed every action there is an equal and opposite reaction:

I have read about Dr Niranjan Acharaya, who says that there is a link between plane crashes and heart attack; they are related to each other and if one person died in India, at the same time, one dies in Australia, Africa and Americas, there is something like gravity that is causing it at the same time in different places on the planet Guj Mix-2, East Africa 61.

There are often conflicting views in the same community. For E1, disasters happening around the world are based on principles of Karma:

There is no explanation as to why a plane falls, like the Russian plane which crashed last night and over 120 people died, there is no explanation as to why; I think it's in the Hindu belief that its Karma, what you do comes back to you. Guj Mix-1, East Africa 62.

Among Hindu participants like T4 (new immigrants Tamils from USA), religious beliefs perform a crucial role in their health promotion initiatives:

About diabetics' amputation of leg or something, awareness among people is less. Here, amputation due to diabetes of hands or legs is very less, because when they have diabetes they are very cautious because they are aware that diabetes might kill them; for heart disease, they are very particular in diet and go for exercise. Among Asians, if they have diabetes they just leave it to God and do not bother. Well, awareness among people is less. Tam Mud-4, 35, India

Health Behaviours- Diet

Some of the first-generation participants were not willing to make changes to their everyday food habits because of the fear of compromising taste. Though their awareness was high during a discussion, they were only willing to experiment and make changes as long as it did not affect the overall taste of their diet as G6 (first-generation Gujarati Muslim from Kenya) explained:

You know we have sag (Spinach) and tell me when it is made with butter etc and when well done you can't resist it... I don't think there is a difference with olive oil/margarine... but with butter the taste is different and more fun Guj Mus-6, Kenya 58

Some of the participants in the study felt that they could not change the way they ate as they had been doing it for many years and had found alternative methods lacking, as G3 (first-generation Gujarati Muslim from Kenya) explained:

We like grease, until dhal is with butter or when the rotis are with butter, then only I can eat food; without that I can't get taste, it is my habit. Everyone wants to try something new and none wants to stop.... It's the taste factor; everyone has different food, Pakistani Lahoris have different taste and Karachiites want a different taste. Guj Mus-2, Kenya 55

Some will add extra butter just to make sure that no taste is lost in deep fry as Z2 (first-generation Sikh Ramgharia from India) highlights:

Even if the food is fried in (clarified) butter, to maintain the taste they will add a little more butter. Rich in ghee, everything is fried and everyone will put butter in their sabji once or many times. Sikh Ram-2, India 64

Punjabis are used to adding butter and salt according to individual taste. Normally for any meal, they always have butter/ghee on the table, so that individuals can top up when needed. Some add to compensate the taste lost when sabji (vegetables) are fried to achieve a crispy taste. Others like B4 (first-generation Sikh Jat from Uganda), feel that they are too old to change:

All those people are like me, we can't break the habit now, and nobody can break a habit such as main eating. Sikh Jat-4, Uganda 59

The participants were aware of their unhealthy diets; some found it hard to change because they felt as if they were too old to make changes, some feared that it will affect the overall taste of the products, while others were less informed about the adverse effect clarified butter had on their health. Some of the participants in the study did mention diet as a risk factor for CHD. Among them, C and R (Sikhs from Kenya) participants did try alternative methods as C2 (first-generation Sikh Kathri from Kenya) explained:

The food is not properly digested, that is the main reason we always eat heavy ; you need to eat fruit first like melon to clean your system and then eat carb food, you need soft food then hard food but we eat hard food first

and then fruit so how will they compress. It is like a traffic jam there, all block and that makes the heart bad. Sikh Kath-2, Kenya 65

C2's understanding of digestion is that it is like a traffic grid. In order to avoid any congestion, he prefers to eat alternate soft and hard foods so that food passages are cleared. He believes that by alternating heavy and light foods he is avoiding any possibility of heart related disease.

R2 (first-generation Sikh Ramghria from Kenya) believes that as long as the body can digest the food there is no harm in eating any kind of food and explains why:

So much butter can be eaten depending on body structure, if anybody can digest it, that's good, without any exercise. People eat and eat and there are some who can't get fat, everyone is different, everyone takes different medicines, illnesses are different, everything is okay if you eat within your limit. Sikh Ram-6, India 52

R2 believes there is no harm in eating a rich diet as long as the body is capable of digesting it. His understanding is that within his circle of family and friends, there are people who eat a lot and never put on weight as compared to others who eat little and gain weight. The media has been running campaigns on healthy living and the benefits of smart food choices. Some of the C (Sikhs from Kenya) participants mentioned about the various measures that were taken in order to continue eating the same diet as C1 (first-generation Sikh Khatri from Kenya) explained:

I get up in the morning and have two glasses of water first thing in the morning and that is good, drink hot water and grease will go.

Sikh Kath-1, Kenya 60

Previously, we discussed about the reluctance some participants showed in making different choices in their day-to-day eating habits. C3 (first-generation Sikh Khatri from Kenya) explained in detailed how the water drinking process was a quick and smart way in reducing fat:

What I do is drink hot water with my food so that the grease is cleaned quickly, like the pipes in winter, when there is cold it becomes hard, in the same way I try and melt the grease so that my system is clean; whenever I

drink water it is hot as it helps you see, and it is hot water not luke warm, there is a difference in that also. Sikh Kath-3, Kenya 65

C3 & C1 used examples from cars as they worked in this field. Their understanding is that the digestive system is like the pipes in cars and when they are blocked, an injection of fluid will clear the passage. Most migrants worry about costs. With limited resources and many mouths to feed, they try and save as much as they can. The participants in the study were aware of different kinds of cooking oils in the market. The majority of the first-generation immigrants buy foodstuffs at their local corner shop, whereas new immigrants shop at the bigger super market chains. B6 (first-generation Muslim from Bangladesh) explained in detail why he preferred vegetable oils:

The Quantity we use is not possible, you get 5 litres of olive oil for 15-20 pound, you can get 25 litres of vegetable oil for £7.50 and we use such a large quantity; when we bring the small bottles, we pour half of it in one curry. We need oil and we are always cooking. Bang Mus-6, Sylethi 59

Cost is the biggest factor when people make food choices as J1 (second-generation Gujrati Jain from UK) explains why:

I am sure other communities are going forward with the fresh food and fresh juice options, but we have a problem in us Asians that we take the cheaper options. Guj Jain-1, Kenya 45

As J1 mentioned earlier, all the fresh food options are good as long as they are affordable. Both M1 and M4 were aware of the risk involved with coconut oil, but the price factor overrides the benefits as M1 explained:

If we get 2 litres of coconut (oil) for sunflower (oil) price then definitely we will buy coconut oil we are used to and we like it better and taste is better. Mal Chr-1, India 37

Affordability is one thing, but knowing and understanding the benefits of using alternative oils is another. S1 (new immigrant- Tamil Sri Lankan) still believes that the community will find it hard to make changes as there isn't enough data which pinpoints that their cooking is unhealthy:

Yeah, its (sunflower oil) cheaper and has better taste, but telling our community isn't of any use, they still follow what they want.

Tamil Chr-1, Sri Lanka 35

Eating fish is preferred by the migrants who originated from the coastal areas (M, S, I). Back home, these participants ate fish regularly and seldom ate other meats. Migration has seen their preferences change from fish to meat, the reasons being many as S2 (new immigrant-Tamil Sri Lankan) explained:

It's better to spend on meat you see, than fish... here we don't get the same taste of Sri Lanka, so we prefer meat better than fish.

Tam Chr-2, Sri Lanka 35

Taste again plays an important role in food choices. Some of the Sri Lankans eat frozen fish like Tilapia, King Fish etc. If given the choice; they would prefer fresh meat instead, because of the taste factor. There are others within the community who still prefer eating the frozen fish 2-3 times a week on average. In comparison, the Bangladeshi participants prefer the taste of fish from back home:

Most of the Bangladeshi participants don't eat oily fish due to taste and cost and depend mainly from the frozen imported from back home.

Bang Mus 1, Syleth 62

Participants whose origins are from Bangladesh mostly eat only fresh water fish imported to Britain. They avoid oily fish as they do not like the taste. Though I (Muslim from Bangladesh) participants eat the most amounts of fish daily, I5 (first-generation Muslim from Bangladesh) believes that they are eating the wrong type of fish:

We normally eat fish which is more than 300g a day, but the thing is that we eat boiled rice and carbohydrate; the fish we eat, we thought it was good fish, but in the area they are saying that it is absolutely rubbish, it is white fish, we don't eat any oily fish, that's the problem. All white fish like Bau, Noore, regal... This fish is imported from Bangladesh, it is frozen, its white fish, not oily fish, we need to eat oily fish salmon etc... we need to eat English fish... And now we have started, we eat a lot of fish, we need to eat oily fish. I had the idea that the fish we are eating is

not healthy... its white fish, I read in the newspaper somewhere that the Bangladeshi people... I think I have the article somewhere.

Bang Mus-5, Syleth 58

B5 is aware of the benefits of oily fish, which he calls “English fish”, and thinks that the community needs to change from fresh water to oily fish, but is not sure that he would like oily fish because he is of the opinion that they are sweet and soft and will not withstand being curried:

No, it doesn't taste nice as it is too sweet, (Salmon) too tender, it can be cooked by boiling it and the fish which is from the Asian continent, what we eat, is white fish; it won't taste as good if you don't cook, but the English food is a bit raw and you can chew it with a bit of mayo.

Bang Mus-5, Syleth 58

Though sometimes they do eat other types of fish available locally, they prefer it fried instead of boiled because of the taste:

We cook fish and meat, both but not have fish just a little bit and also we sometimes try and eat the English fish like cod, mackerel, and trout, we don't cook it the fancy way but we do it more fried. Bang Mus-5, Syleth 5

Physical Activity

Most South Asians do much less physical activity than the wider population. The reasons could be many, but recent research has highlighted that common factors are: lack of basic understanding, their personal and religious beliefs, 'laid back' attitudes, and cultural sensitivity issues like type 2 diabetes. This culturally accepted sedentary lifestyle is evident from childhood, where parents encourage children to spend most of their time with books and their major focus is on educational achievement. Most parents see sports as recreation and not a career option. Children are used to this inactive lifestyle which is carried forward to adulthood. This is a vicious cycle where this habit continues from generation to generation.

Health beliefs - physical activity

Cultural influences on participants' perceptions and understanding of health and physical activity were profound. Different groups had different levels of understanding. Most of the new immigrants had some levels of education and make efforts to do some physical activity daily, whereas older immigrants considered household work to be equivalent to physical activity.

Psychological factors

Gupta and Brister (2006), in a study based in Canada, asked the question "Is South Asian ethnicity an independent cardiovascular risk factor?". Among the older migrants there was an understanding that physical activity could cure diabetes. R2 (first-generation Sikh Ramghria from Kenya) believes that because of his lack of physical activity he is vulnerable:

I am getting old now, I hardly do any exercise and once you put on weight, it leads you to diabetes and diabetes leads to heart attack

Sikh Ram-2, Kenya 62

Supporting R2 claims, B8 also emphasises that there is a poor uptake of physical activity within his community:

There is no exercise and only 1% of the people do it.

Sikh Jat-8, Tanzania

Newer migrants like T4 (new immigrant- Tamil speaking from India) felt that there was very little awareness of the risk involved with diabetes and goes on to explain:

Asians, if they are diabetic, just leave it and are not bothered.... so final stage of diabetes will end up in heart attack. Tam Mud-4, India-36

Life in London is different to what T4 is used to:

In villages there is a lot of fresh air, there is more exercise, there is hard work, and pollution is less. Tam Mud-4, USA 36

The hectic lifestyle in London and the pollution is not very encouraging for physical activity enthusiasts to venture out daily. Others like C3 (first-generation Sikh Khatri

from Kenya) felt there has been an increase in diabetic cases within his community which has resulted in an increase in heart attacks. Being physically inactive or the lack of exercise is considered normal for South Asians.

Being less active

Eating a high calorie diet, being less active, and burning fewer calories increases the risk of CHD as Z2 (first-generation Sikh Ramghria from India) explained:

Could be anything, but I think the main factor for heart problems is rich food, if you have rich food, you feel tired and stay at home; you need to go out and burn your calories and if you eat rich food and do not go out anywhere then how will you burn your calories? Sikh Ram-2, India 64

One of the major reasons for an increasingly sedentary lifestyle is the increased affordability of a car; people are walking much less than they used to, and J2 (second-generation Gujarati Jain from India) has lived the experience and thinks that the next generation has it easy:

I had to walk nearly 3 miles to school, but my son now has to walk 100 yards; everybody goes by car. Guj Jain-2, Kenya 42

Getting people to voluntarily change a habit is much easier than forcing them to do so. Change always comes slowly. E1 (first-generation Gujarati from East Africa) felt that the exercises were not catered for the South Asians and goes on to explain why:

I have seen many groups doing exercise by moving one hand in one direction and then leg in one direction. Do you think people are interested, most of the movements are catered for the youngsters, so how do you think our community will adapt? Guj Mixed-1, East Africa 62

Dancing and singing is important to South Asians, but some are shy and the concept of wearing shorts and dancing with total strangers is embarrassing:

They are forced to do certain exercises that they are not prepared to do, but it needs to be shown that it is useful for them and maybe if they get something out of it, may be some incentive, but if they tell me to do the things like the Whites do, like wear a dress and dance to music for one hour, may be for our community they will need special exercise, that's why some of us are turned down from the main concept of exercise.

Guj Loh-4, Tanzania 62

May be I just want to move my legs six times and my hands three times, that way I think I have done exercise, not forcing me to jump in one place, do you think you will like a set system or something different?

Guj Loh-1, Tanzania 62

Some believe that having separate facilities for men and women would increase number of participants as L1 explained:

It's difficult for someone who is wearing sari and shalwar and then change to track suit, nobody really cares about being in shorts, but may be self-conscious, I think we need to come out from the shell and be encouraged to do things but if they are forced to wear things definitely they may not accept. Sikh Loh-1, Tanzania 62

I think we can't exercise freely, like the white people. We need separate swimming pools because people are very shy and if there were separate facilities then we will surely go, you see. Sikh Jat-3, Uganda 60

Health Behaviour - physical activity

The South Asian way of life was considered by the participants to be responsible for their unhealthy lifestyle. Traditional practices and lifestyle habits derived from the South Asian culture were accepted and followed without any scruples about health consequences.

The Cost Factor

Most of the participants in the study were keen on losing weight and leading a balanced lifestyle, but found it difficult due to numerous barriers. They felt that physical exercise could improve their health and also protect them from future illnesses. The average health centre pass costs around £30, which for most of the first-generation participants was expensive and unsustainable in the long-term. This was mainly because of family commitments, as they had larger families as I7 (first-generation Muslim from Bangladesh) explained:

I think if we get Asian gym there will be improvement in our community and it has to be free, there is one in Roundy Road and they ask [£]35 for a month. Bang Mus -7, Sylethi 62

Why can't NHS take that and help us with yoga, we have to pay to get to this program around £200, I can afford it, but what about the others? they should recommend yoga it is best, not like the English exercise where you move one hand one leg. Sikh Kath-3, Kenya 65

For C3, it is not only the cost which is a barrier to regular physical exercise, but the choices amongst exercises, which he feels is lacking. For the wider community participation, he recommends traditional exercises like yoga and not the box standard exercises.

Time Factor

We do so much back home... There is more activity like swimming etc.... here even if we want to do things there is no time.

Tam Chr-1, Sri Lanka 35

What S1 is trying to highlight is that time is a barrier to physical activity, especially with their working patterns and the intension to work longer hours. Some tend to work in excess of 37.5 hours per week. If they have the option of gym facilities at work, their priorities are different as M2 (new immigrant from Middle East) explained:

Normal person like us don't have the time, we are ordinary people, I do enough of exercise in my work. Mal Chr-2, India 35.

According to M2, ordinary people are those that have to work in excess of 37.5 hours per week to pay for their mortgages and loans. Doing household work seems like an excuse for not partaking in other forms of activity. Others allocate a time slot for playing their national games like cricket, but organising a team of 11 players a side is difficult as most of them prefer working through the weekends because of the lucrative pay, as T6 (new immigrant Tamil from India) highlighted:

Only once a week, one hour playing Tam Mud-6, India 40

Facilities and Trainers

Some of the participants wear *salwar kameez*, a traditional dress worn by both men and women; for some it is difficult to jog/exercise in it as I8 (first-generation Muslim from Bangladesh) pointed out:

We don't have a place for Asian people, every where it is for English people. I will go when there is a special Asian gym, or may be tai- chi; exercise with our dress is difficult. Bang Mus -8, Sylethi 64

There is also a cultural or personal preference of wanting to congregate in a male only environment as L1 (first-generation Gujrati from Tanzania) highlighted:

There are so many keep-fit classes, on weekends and I have not seen one class where there are Asians Guj Loh-1, Tanzania 62

C3 (first-generation Sikh Khatri from Kenya) explained further:

Why should we do it? he can't go, he can't go... we don't have separate gyms for us, though we have cut our hair we have to have privacy, and sometimes there are mixed gyms, we need separate trainers for male and female, in separate timings also. Sikh Kath-3, Kenya 40

Not only is C3 highlighting the fact that they find it hard to work out in a mixed gym, but also taking instructions from trainers who are much younger than them is embarrassing. Most Sikh men grow their hair as a religious identity; they also feel a lack of privacy if during exercise their turban happens to fall off.

Swimming costumes usually reveal a person's figure. According to L4, this causes embarrassment because men and woman in the community are not willing to expose themselves, either due to religious reasons or because they are self-conscious when it comes to their body shape. They would prefer to swim in traditional clothes which they were used to, before they migrated to the UK. Some try and fit in society by having their hair cut short but those who follow strict religious guidelines are finding it difficult as B8 (first-generation Sikh Jat from Uganda) explained:

This gentleman mentioned about going to the swimming pool with the turban, they have difficulty, but some cut their hair in the name of blaming religion. Sikh Jat-8, Uganda 61

L4 (first-generation Gujrati Lohana from Tanzania) highlighted:

Look at our ladies, they feel ashamed or shy to wear swimming costume, look at the Ghoris, they wear so short and they don't shy away because they don't really bother what someone says, there are so many old women who won't undress in front of young girls, it's embarrassing for them, especially for their stomach coming out; these things stopping us because we are obese and could this be a setback? Guj Loh-4, Tanzania 62

I think there should be more walking clubs, walking clubs need to be more in the freedom style and not compulsory, I think there need to be, for example, like say 11-12 people need to walk to the park, then enjoy a picnic there and not that there is only fatty food there, some healthy too, enjoy a few walks there and that brings natural exercise and come back by some vehicle. So now we have a time out and exercise

Guj Loh-4, Tanzania 62

Walking is something most of the first-generation participants prefer over intensive exercises. They were used to walking in the past before they immigrated to the UK, due to working and time restrictions. Since most of them are not retired, they feel they have ample amount of time to pursue their interest now as previously their interests had been sacrificed for the family.

Alcohol

Thun *et al.* (1997), in a study conducted in the USA on over half a million adults, highlighted that the risk of all types of CVD combined was lower in drinkers than non-drinkers. Ten out of 83 participants in the study believed there was a link between CHD and alcohol. Among all the different religious groups in this study, the Christians were the only group to spoke candidly about alcohol. Some Sikh participants drank alcohol occasionally, such as in social gatherings, while none of the Muslim participants drank.

Health beliefs - alcohol

Health beliefs and knowledge about alcohol varied not only across religious groups, but also between first and second-generation, as well as new immigrants. Younger participants in the study were more relaxed about drinking than their older colleagues. Within the Sikh caste, Jats were more open in talking about the community acceptance of drinking socially. Corral *et al.* (2000) in a meta-analysis of over 50 studies, found that 20-30g or 2-3 drinks offers maximum protection to the heart. Some of the participants were advised by the GP to drink alcohol because of this very protective factor as M1 (new immigrant from Middle East) explained:

Once or twice a week and also in limited quantity because it burns the energy and burns the fat. Mal Chr-1, India 35

The benefits of drinking are inversely proportional to the amount of alcohol consumed, as studies conducted by Corrao *et al.* (2000) suggested that benefits are shown to be more towards moderate drinkers. M5, also a new immigrant, noted that his work colleagues in the UK enjoyed a drink at a slower pace:

Like people in England when they drink they know how to go about like 1 pint in 45 minutes, not like us, we drink at least 5 in that time.

Mal Chr-5, India 35

M2 (new immigrants, Christian, from the Middle East) socialize regularly as their extended family (close friends) are spread around the country. Birthdays, anniversaries, baptisms, festivals, and weddings are some of the reasons to celebrate. These occasions come by at frequent intervals, usually on the weekends or Bank holidays.

We want effects very fast and this is the way we are taught how to drink.

Mal Chr-2, India 35

Normally we are not systematic, when we go for party, how much we drink depends on the crowd, sometimes there are lot of army and navy people. Mal Chr-3, India 36

Some of the new migrants had served a few years in the armed forces where drinking is part of the culture and alcohol is subsidised. Among friends, as a matter of prestige,

there is always competition to not only drink large amounts, but also within a short period of time. Moderate drinking is rarely practised, as most of the Christians are not aware of units and the amount that is permitted. Since some of them are pressurised by their partners to stop drinking at home, they still continue to drink at parties and social gatherings. Though most of the M participants have lived in Britain for well over 5 years, they still felt they had a lot to learn about their adopted country.

In their study, McKee and Britton (1998) highlighted that binge drinking could increase the risk of cardiomyopathies and ventricular arrhythmias. But M2 (new immigrant, Christian from Middle East) is more worried about the fact that excess drinking will increase his weight.

Moderate drinking will not cause as much damage as regular and I think put on weight Mal Chr-2, India 35

With Beer you eat more and put weight. Mal Chr-1, India 37

After I started drinking beer, I put on weight. Mal Chr-4, India 36

I think drinking rum, you put on weight. Mal Chr-5, India 35

Romeo *et al.* (2007) in a large study showed that moderate drinking of beer does not increase one's weight. South Asians eat more, especially when they drink alcohol. Most of them prefer having a snack with their drinks. Snacks could range from fried and assorted meats to salted peanuts or cashews. Previous studies have also shown that beer increases ones appetite.

Health behaviours - alcohol

Though some of the participants drank, they still faced restrictions from family and friends. Most social drinkers drank outside their homes in the company of friends, especially during festive seasons and functions. Some have tried to change their behaviour by drinking only on important events. According to Nazroo (1997), drinking seemed to be linked to social class within religious and ethnic groups. Even though the Gronbaek *et al.*'s (2000) analysis of the Copenhagen City Heart Study had no participants of South Asian origin, it clearly highlighted the fact that wine drinkers were better educated and non-smokers, as S1 (new immigrant, Tamil from Sri Lanka) explained:

I think we could control smoking and drink better drinks.

Tam Chr-1, Sri Lanka 36

Cochrane *et al.* (1990) clearly indicated the high incidence of CHD among South Asian men born in their home country than among South Asian men (Hindu and Sikh) born in the UK. Alcohol related incidences were higher among the Sikhs, in spite of alcohol being forbidden due to religious reasons. B5 (first-generation Sikh Jat from Kenya) explains why Jats drink:

We are not allowed eating meat, everyone is different in this country you have freedom, when you drink alcohol you need to eat.

Sikh Jat-5, Uganda 65.

Other factors

Snoring

According to Onat *et al.* (2007), there is a strong link between sleeping disturbances and metabolic syndromes. L4 (first-generation Gujrathi from Tanzania) felt there was also a strong link with stress and goes on to explain:

Have you not noticed that we are now snoring more because of tension?

Guj Loh-4, Tanzania 62

L4 thinks that because of various stress factors and sleep deprivation, he has started snoring. Others like C3 (first-generation Sikh Khatri from Kenya) links snoring to greasy (fat) food consumption and has seen first-hand his sibling snoring and sometimes gasping for breathe:

I feel with all this grease we snoring a lot and that causes heart problems, I know my brother snores so much that I sometimes think he is having no air to breathe. Sikh Khat-3, Kenya 65

Age

Three of the participants of this study mentioned age as one of the cause of CHD. As mentioned earlier, some feel that being South Asian is a risk factor by itself and on numerous occasions during the interviews the researcher remembers participants mentioning:

We are anyway going to die so why bother?

New migrant M1 (new immigrant-Malayalam from Middle East), a catholic Christian, witnessed friends and family as young as 35 suffering from heart related diseases:

One of my friends got it at a younger age. I think he was even less than 35 when he got it. Mal Cat-1, Indian 37

M2 also a Catholic Christian immigrant knows friends and family who suffer from heart-related diseases:

One of my good friends had a heart attack; he is my age.

Mal Cat-2, Indian 35

Most research has highlighted the risk of CHD for people above the age group of 40 plus. New migrants M1 & M3 have seen a sudden shift in the age range towards the younger side. As E3 (first-generation Gujarati from East Africa) believes that:

Heart attacks are usually from older people, after 65-80.

And he goes on to explain why people have heart problems above 65:

Before 65 I have not heard anyone having heart problems, its like playing cards you see, when it is new its nice and when it gets old no one wants the cards, same way elderly people get worn out from the age of 65, the skin becomes wrinkled, your blood is not pure, you get cuts here and there, when men become older they get worn out by nature.

Guj Mix-3, East Africa 62

In contrast to new immigrants, E3 has experienced people around him suffering from CHD above 65 and considers life to be like a deck of cards; the more it passes you by, the more worn out it gets. E3 believes that with age, you accept various diseases and hardships.

Heredity

Ten of the 83 participants linked the hereditary to CHD. According to L1 (first-generation Sikh Lohana from Tanzania):

It runs in the family, its difficult to stop Sikh Loh-1, Tanzania-56

M3 (new immigrant-Malayalam from Middle East) feels that:

If one gets it (heart attack) the other family members will also follow; I think it is hereditary when you are in the same house you have the same food and could be hereditary food problem, right? Could be type of food, because they live in the same house and same diet if one gets something, the other should get it also. Mal Chr-3, India 36

T5 (a Hindu New immigrant) mentioned that it ran in the family, and after having one case in the family, there is a high probability of others being affected:

According to my view, one of the main reasons for heart problems is genetic reasons, hereditary reasons. Tam Mud-5, India 39

Z3 (first-generation Sikh Ramghria from India) had already witnessed a member of the family who had suffered from this disease and he felt that it was beyond his control:

For me it's in the family you see.... My father also suffered from heart problems you see. Sikh Ram-3, India 63

R2 (first-generation Sikh Ramghria from Kenya) talked about the huge media interest in relation to genes/heredity and CHD and considered it an important factor, because his GP did ask him if he had anyone in his family suffering from heart disease. He opined:

All this talk about the gene from your parents, we have heard quite a lot recently in the media, could just be my opinion, because that's why the doctors all ask if you have anyone in the family who has problems.

Sikh Ram-2, Kenya 64

Both first-generation and new immigrants shared the view that getting CHD had some relation to one's genes. Some have either experienced the death of their fathers or a close family member. Media played an important role in their understanding with regular news outbreaks of disease and hereditary links.

Seasonal changes

Some of the participants in the study believed that climate could have an effect on CHD. There is some evidence to support this; Douglas *et al.* (1995) in a study in Scotland showed higher hospital admissions in spring for those below the age of 45,

and in winter an increase for the older male population. In another study in New Zealand, Douglas *et al.* (1990) showed a difference in CHD deaths during different seasons, being higher in June/July & August (winter) and lower in December/January & February (summer). This shows the seasonal variation as J3 (second-generation Gujrati from UK) explained:

At the moment you have cold and then you have shorter days and then the season changes, your body can't adjust to all this and you have artificial heating. Here there is no natural light and also heating like the African and Indian countries Guj Jain-3, Kenya 40

G2 felt that seasonal changes had an impact on health:

The day is short for some time in winter; the day becomes shorter thereby you try to finish all your work in short time and that is stress also.

Guj Mus-2, Kenya 55

Both G2 (first-generation) & J3 (second-generation) participants are British citizens, from East Africa and lived in UK for many years and still find it extremely hard to adjust to the seasonal variation. G2 links heart disease with the shortening of the day, when days tend to be shorter and nights longer whereas J3 believes that the heat generated from the heaters could also have an impact.

I might be wrong here but most of the heart attacks happen in just a month after winter, that's my estimate as I have heard it often that he died, they died from heart attack... its because it gets dark and it affects every human being, because you are always indoor and outside it snows and you can't do anything about it. Guj Loh-4, Tanzania 62

Woodhouse *et al.* (2004) also suggested that in winter there is an increase in plasma fibrinogen, plasma cholesterol, red and white blood cell counts and also blood pressure. P11, I4, C4 & C3 have all linked the lack of sunlight to CHD:

But there they may walk for 6 miles without breathing to see friends and families ... it's very cold and they can't go out and that's why it's made problems. Pak Mus-11, Azad Kash 61

We are brown, we need more sun light, right, our skin pigments must have sun light, our food is always the same unless they are seasoned.

Sikh Kat-4, Kenya 64

We are from Africa so we need sunshine for our pigments and here there is less sunshine and that is affecting our body and heart.

Sikh Kat-3, Kenya 65

What P11 wanted to highlight was that back home, they could walk miles without any problem, but after coming to the UK, they find it hard to go down to their friends' places. After living in the UK for many years, some of the first-generation immigrants are finding it hard to adjust to the seasonal changes in the UK. In the Indian subcontinent, they experience two seasonal changes, winter and summer as compared to Europe where there are four. I4 links CHD with one's mood. C3 and C4 talked about the correlation between food and sunshine. Just like the food needs spice, they believe that the skin also needs sunlight.

6c. Health experiences

South Asians' belief in God and notion of *Dharma* leads the participants to believe that as long as they do the right thing, their health would be taken care of. If an illness occurs, it is considered their karma, as something inevitable that has to be faced by them as consequences of their wrong deeds in previous or present lives.

“Losing my faith in you”

“Losing my faith in you” were the words muttered by M1 (new immigrant-Malayalam from Middle East) when he left feeling disappointed with his GP, the gatekeeper to the health care system:

Going to GP every time for general check up is no use. We go if there are only serious problems, because when we have problems it won't work out so when we don't have anything, what is the use? My wife has a heart problem, she is only 32 and went to GP and they say 'its no problem, you're young and may be you are just tired;' I told the GP, 'A doctor in

India mentioned that there is something bad with the valve,' and they don't believe it, they want history report and I don't have it now, I requested then to do ECHO and they say when it happens next time, we will see, what next time, maybe she won't live!! Mal Chr-1, India 37

L3 is getting frustrated in asking his GP to do a few tests:

Tried telling my GP and he seems not interested, since he is an Asian, he says he will arrange for it and always forgets. Guj Loh-3, Tanzania 45

We go to him because of language problems. Tam Chr-1, Sri Lankan 36

We speak the same language (Tamil) most of them use the service as he is from home and he understands us.

Tam Chr-2, Sri Lankan 35 (except for J)

I think the main problems are with the Asian doctors and a lot of people can't speak English and that's why they go to them but GP can't speak all languages; our people need to understand that I know translators are expensive but it's less embarrassing than asking a mother to take her young son and making the GP ask embarrassing questions.

Pak Mus-3, Azad Kash 36

I7 believes that his problems all started when his well acquainted GP retired. Though the new GP was of South Asian origin, he did not speak Bengali and was also trying to reduce the amount of prescription drugs:

Used to take a lot of medicines and now the new GP cut down less so I don't like it; out of 10 medicines he says 2-3 okay...He said I don't need other medicines, if any thing happens to me they will (only say) I am sorry, he is an Indian GP and we use interpreters. English people put Indian doctor who not speak Bangla and how do I tell him I need 10 tablets; they think Asian? okay he will know the language, due to some changes in distance (travelling) they were all patients of Shaw who was a Bengali speaker, and now he is retired. Hamara doctor is a bit different.

Bang Mus-7, Syleth 62.

All they do is to give anti-inflammatory I Brufen and the problem is that as soon as you take one, if there is some reaction then all the GP will say is I am sorry. Pak Mus-13, Azad Kash 55

Appointments

Some of the participants did mention the difficulty in getting appointments as P9 explained:

First of all you won't get an appointment straight away, if you are feeling bad you won't get an appointment...if you need an appointment straight away the GP is always busy...I don't understand.

Pak Mus-9, Azad Kash59

Now its very hard, before, it was easy and if we need appointment we have to call in advance at 8.00am and find out... now there are a lot of new people coming to him as he (Dr) speaks Tamil.

Tam Chr-1, Sri Lanka

As most of the new migrants worked, the option for them is early mornings, but for some reason this is usually fully booked. S1 thinks it is because of the influx of new Tamil speaking migrants from India which is making it difficult for him:

If you have a problem from 2 days you have to mention from 5 days, if you say 2 days they will say wait for 2 more days as it is not that serious.

Mal Chr-5, India-35

M5 justified the need to lie in regards to keeping appointments. M5 felt that in order to make sure that he is given priority over the others he needs to lie and make his condition sound critical in order to get attention.

Lack of Time - "who has set the 7 minute rule?"

With fewer multi-lingual GPs still remaining and the changes in government policies of not recruiting non-EU doctors, some practises are finding it extremely difficult to cope. C5 felt that after going through the difficulty of getting an appointment, the time allocated with his GP was very limited and hinted that this could be the reason as to why some people missed appointments:

When I need the government why is it not there? That is the point, you see, who has set the 7 minute rule? If the doctor thinks I need more time then I need more time, he should not worry, in BUPA if they charge you say £100 for 1 Hr, I am sure you will get one hour and no one will miss the appointments. Yes we prefer Asian one, he speaks some Urdu and we understand, difficult with the *Ghora* (White) he will say something which I do not understand. Sikh Kath-5, Kenya 63

There are so many Asian GPs who just want to get money and do nothing.... That is my personal opinion.... When we went to have some check-up they went about as they wanted to get rid of us.... Okay this is normal, if I say. I have diabetic problem.... They will ask questions: Why you feel like that.... I know because it is hereditary problems.... Like loosing weight 10 pounds/thirst/ urine 2-3 times in night... these are the symptoms and the GP will say Everyone urinates in the night.... everyone is like that... I said okay.... See you later...bye, so why do we have a feeling that when I have a problem and they don't help and not solve the problem... if that is the case and then what should be done?

Mal Chr-1, India 37

C3 (first-generation Sikh Khatri from Kenya) also felt that his GP was rude:

Educated doctor won't talk to you, if you tell him for example I have malaria as I would have read on the net, what the symptoms and he will say sorry, I am the doctor not you. Sikh Kath-3, Kenya 65

Though some, like P13 (first-generation Pakistani Muslim), have been with one GP for over 10 year he still believes that he is not been listened to:

NHS GPs, you know, they don't listen to you, if you go to the doctors for over 10-15 years they just put you on the bed and ask you what is wrong with you, they don't check your case history. Pak Mus-13, Azad Kash 55

C2 (first-generation Sikh Khatri from Kenya) now prefers to have a white GP instead:

I prefer the *ghora*. He is understanding as I can tell him and he is understanding, Asian one is always quick and he won't see you, just by looking on the computer he does a diagnosis... why don't they have

online consultation? ... maybe we can do it by the camera. Here the GP instead of checking will ask me from two meters away, what is wrong with me and not bother to wait (for my explanation), in Kenya they used to spend time to do full check up, here it is all about time.

Sikh Kath-2 Kenya 65

As compared to the others, C4 (first-generation Sikh Khatri from Kenya) believes that he is seeing the GP more frequently than he did back in Africa:

I stay 20 years in Africa and I see the doctor just 5 times in 20 years, and here, more than 37 times for sure now. Sikh Kath-4, Kenya 64

Health Advice

The participants in the study expressed a kind of selective hearing for all the advice given by the GP. Things like diet and physical activity were not taken seriously, but if the doctor mentioned about intoxication, they were willing to see him regularly as C1 explained:

My doctor said a simple thing, it is like an open drain and if you don't clean it then you will get blocks and one day it will get blocked.

Sikh Kath-1, Kenya 60

For some, the advice comes too late:

My friend's father was taken to hospital and by the time doctor came he died, the doctor told his son if he consumed alcohol once in a while he wouldn't have died. Mal Chr-1, Indian 37

Though some of the participant in the study did feel that they were let down by their GPs on countless occasions, they still take his/her advice in lifestyle changes, like S1 did mention that drinking was recommended by his doctor:

Doctor recommends drinking. Tam Chr-1, Sri Lanka 36

Advice on losing weight and physical activity is not taken seriously. What participants do is listen to what they think is right for them, called selective listening, so that when their GP recommended drinking alcohol, they took the advice very seriously, but were not aware of the quantity:

One doctor recommended (drinking), but I am not sure about the whole thing, if you open a bottle, I am not sure, (I might drink) the whole wine bottle. Sikh Jat-1, Uganda 50

Though C3 (first-generation Sikh Khatri from Kenya) doesn't drink because of his religious upbringing, he feels he is forced into doing so:

I don't use alcohol my doctor recommended drinking, he says one peg whisky with hot water for six months will be good for the heart, but I don't drink, Asian doctor recommends that this will also help me to reduce weight. Sikh Kath-3, Kenya 65

For B3 & B1 their awareness of the risk of CHD was through their GP:

The main reason for heart attack is high blood pressure and doctor mentioned heart is weak Sikh Jat-1, Uganda 50

I do suffer from high blood pressure and basically I haven't done exercise.... basically on lifestyle issues, I have tried to change my diet and doctor has told me take less salt. Sikh Jat-3, Uganda 60

With changes in legislation and bold targets, smoking has become a priority issue for most GPs:

I had heart problems 7 years ago and doctor advised me to quit smoking, but sometimes I still smoke now you see, because you have stress, it's the main problem for the Asian families. Pak Mus-3, Azad Kash 53

In spite of the GP's advice on the risk linking smoking and CHD, some continue to smoke:

Yeah. Well I am sorry to say after the doctor recommended I still didn't follow the instructions, I still smoke. Bang Mus-5, Sylethi 58.

Both G3 and G2 had tried giving up smoking on numerous occasions, especially during Ramadan, without any nicotine replacement therapy. Some clients have been successful for only a short time and with constant cravings and withdrawal symptoms they started smoking again:

My doctor told me start smoking again because I was looking miserable and he said you will become mental man, my doctor told me start again

for when I stopped I was craving for food, my weight from 87 went to 109kgs because I was eating chocolate. Guj Mus-3, Kenya 49.

People who stop smoking do initially gain weight because of the changes in their sensory organs, they tend to taste and smell things better; some get irritable quite easily:

Yeah, the doctor say me (told me) I put so much weight and that will affect my heart. I cut down and the doctor told me, smoke again, I was always angry at the kids and then the GP told me start again.

Guj Mus-2, Kenya 55

Experience in Hospitals

The reluctance to be admitted in hospitals was acknowledged not only by family members known to the researcher but also the participants in the study as C1 (first-generation Sikh Kathri from Kenya) explained:

There is so much less time in the hospital, they need more time that could affect the heart, if the government said you have to pay 20% tax, I will pay but not push you quickly, they save money and then tell us to change our lifestyle. Sikh Kath-1, Kenya 60

Although there were mixed responses in relation to the quality of care received by the participants in hospital the overall feeling was satisfactory. With so much emphasis on South Asians and Coronary Heart Disease, C1 (first-generation Sikh Khatri from Kenya) was a bit perplexed when he was admitted in the Cardiac unit:

I went to hospital when I had an angina attack, very mild and I was shocked that there were no Asian people. Sikh Kath -1, Kenya 60

C1 is trying to say that it is not true that South Asians are a high risk group because when he was admitted, he was the only person of Asian origin in the ward. What C1 experienced is a quick turnaround in intensive care, which is very expensive to run, but he feels he was moved around because of the hospital's need to rotate beds fast.

Lack of translators

Johnson (2004) highlighted that proper communication is crucial in the delivery of satisfactory healthcare. One of the difficulties faced by the participants L2 & C3 were finding translators as C3 highlights:

If I need translator in hospital they won't arrange and ask for me to find someone as they say all are busy. Sikh Kath-13, Kenya 65

When there is sufficient notice given, they always find excuses of not arranging one. There is always a need of translators in the hospital, sometimes when we tell them we need one they don't arrange it and keep saying that we need to ask for it well in advance, that is affecting us, there is a need for 24hrs translators. Guj Loh-2, Tanzania 48

Lack of vegetarian food in hospitals

Another difficulty faced by South Asians in the hospital is the food provided, as most of the Gujarati and some of the Punjabi-speaking participants are vegetarians. They all found it extremely difficult to eat the food provided in the hospital because of their religious beliefs as Z6 (first-generation Muslim from Pakistan) explained:

People are eating bread with tea because they are vegetarian and here (hospital) they don't understand that vegetarians don't eat meat, egg and fish and also the oil used has to be strictly animal fat free.

Sikh Ram-6, India 6.

Some are have taken the alternative route by asking family members to cook food for them, but with the Asian notion of trying to provide the best, they might end up by not taking the right instructions of what is allowed and what is not as E1 (first-generation Gujrathi from East Africa) explained:

They need to get food from home, and you know in our cooking, you cook the best and not look at salt and spices and also the sweet, the nurses will say yes, yes and there is no proper instruction regarding food and how and when needed, we have to tell these people what our needs are.

Guj Mix-1, East Africa 62

The hospital feels it is doing the right thing because they take advice from community leaders and invite them for taster sessions. Some members of the community do not think that they are the right people to be consulted on the matter:

They go to the food tasting in hospital, (staff) don't tell them that the food is microwaved and Ghoras get special food fresh made, we get microwave food, if you have educated people in the community then only it will have effect. Sikh Kath-3, Kenya 65

But the newer migrants they are happy with any food provided:

I am happy if I get Asian food, (if) I don't get I don't worry, I try Asian or any food. Tam Chr-1, Sri Lankan 36

Various methods used in delivering health promotion

Different methods were used in delivering health promotion advice to the wider South Asian community. Most common were leaflets and posters. Those working as taxi drivers were aware of health promotion warnings regarding drunk driving and smoking through "Sunrise Radio" (the most popular station) that is also used frequently by the "*Baheno Group*" as discussed earlier. For most of the new and old migrants television was the most popular choice.

Changes to the lifestyle

Most of the participants in the study were watching an Asian channel when the researcher had gone to conduct the focus group. Anecdotal evidence shows the rise in popularity in Britain and in other Western countries of Asian channels; they find the local Western channels boring and non stimulating. C3 changed his lifestyle by watching a local Guru (holy man) do exercise:

I think this new program, Punjabi program which is good for yoga will help for all ailments, I think it is good they have shown it so many times.

Sikh Khat-3, Kenya 65

Programs based on cooking, songs, news, sports and politics were also very popular. For some participants, the research programs shown on Asian channels help them in making educated choices right from exercise to cooking:

There are research projects and you can see that changes of new research every year generally; if you do more exercise you are healthy.

Mal Chr-3, Indian 36

For some of the S and J participants, watching BBC and adverts on ITV helped them change their lifestyle (I think) because it is good the white people use it, I meant people use margarine, you know, they show on TV Flora, London Marathon; it's good that why people use it and it reduces fat in the heart. Tam Chr-3, Sri Lanka 35

For J3, life back in East Africa was totally different and felt that people were much friendlier and interactive:

Just to give you an example of back in Uganda when we were growing up there was no television and you used to get involved with something else, though there was radio, but it was restricted and so we were getting involved more with helping out in the family, we used to spend time like meeting people more, going out as a family unit, there was more of the family mixing and all the extended family bit. I still remember we used to enjoy going out and meeting new people, calling people home to show our culinary skills and that's where alliances are made or broken and marriages as well. Nowadays it's the click of the button like you have the shaadi.com (online matrimonial site). Guj Jain -3, Kenya 40.

What J3 is trying to highlight is that after migration, people have less time to socialise and spend more time in their individual pursuits. People in the UK spend more than other Europeans in consumer technologies. With the advance in technology, sacred institutions, such as marriage are being commercialized and made ever more convenient, perhaps not without loss of their quaint charm; the virtual world has transformed the community.

M4 narrated to the researcher that that he became aware of the 7/7 bombing only after the local station Kairali (Malayalam Channel) broadcasted from UAE during an emergency bulletin and went on to say:

Not only for local news, international, have I watched Kirali (Malayalam Channel).

This aptly shows how important Asian channels are for some participants.

L4 believes that majority of the older immigrants sit at home and watch television, and have totally lost touch with society:

Well what a person does is to come home from work, eat and sleep and there is no exercise, look at television in between and all he does is sleep and that doesn't digest at all. Guj Loh-4, Tanzania 60

Most of South Asians do not watch both the BBC or ITV channel, except S (new immigrant- Tamil from Sri Lankan) and J (second-generation Jain from UK), instead preferring, with the help of satellite TV and the Internet, programs from back home. The popular TV serials are "Pardeshi" (Foreigner) or "Sas- Be- Kabi- Bahu Ti" ("The mother-in-law was a young bride once"); their popularity is such that viewers are glued to their seats and prefer to eat in front their television sets:

We are so used to TV and eat and do everything in front of the TV and all this has an influence on us in a small way. Guj Loh-4, Tanzania-62

Health Campaigns

Health Campaigns can be very informative as long as they are interpreted correctly, most of the participants in the study were aware of the nationwide campaigns conducted by the Department of Health like Health Living, Smoking Kills, etc.

In all cigarette packets there is writing about how bad smoking is.

Tam Chr-2, Sri Lankan 35

Some felt that campaigns should have come much earlier:

If only we were told of the heart problems and goodness.

Guj Loh-3, Tanzania 45

The main reason is the food is full of grease the food we cook at home, it is not our fault as no one told us what needs to be done or how to cook.

Sikh Kath-3, Kenya 65

There is a very profound need within the South Asian community for culturally sensitive and multi-linguistic campaigns, the reason according to J2 being:

They have poor understanding and they still eat like they used to in Africa and they walk like they used to ... my mum used to say that if she didn't eat a *Gulab-Jamun* (Asian sweet) she won't get the energy... unfortunately they are unaware. Guj Jain-2, Kenya

Another campaign is the 5-A-Day Fruit and Vegetable, but *L4* has his reservations, and goes on to explain why he is totally sceptical and feels that the sole purpose of the campaign is to sideline the Asian the community:

I don't understand how the 5 fruit-campaign plays a good role in the heart. They talk about 5 fruits a day especially with the Asian community which is good for us and kids too, so if we cut down the amount of oil, it's good for the digestive system, I do agree that fruits are good, but our food is also good for the heart, do you think 5 fruits a day will protect the heart?

Guj Loh-4, Tanzania 62

Most of the participants talked about the posters and leaflets on health-related issues which were seen in GP surgeries, Hospitals, Voluntary Organisation, Councils, Job Centres etc.

Most of the leaflets are not multi-linguistic and they have trouble in understanding English as it's not their first language. Any literature in English for the white community, and do you think the whole community reads the leaflets? Sikh Jat-3, Tanzania 64

Summary of findings

The findings from this chapter clearly highlighted that not all South Asians are the same in respect of their health attitudes and behaviour in the context of CHD. The central role played by religion, which influences every aspect of the participants' health and CHD experience, are clearly highlighted in this study.

Participants felt that the British society and culture had contributed positively to their health and well-being in many ways and changes to their health attitude and behavior were part of the process of adaptation to a new culture.

Stress is a common phenomenon experienced by all the participants, irrespective of their age, religious affiliation, caste or country of origin. However, what distinguishes

them from each other is the core reason for this stress. Among the first-generation participants, worry about their children and the concepts of Dharma and Karma stand out as causative factors. Newer immigrants had younger children to worry about. Pleasing others was a common trait for the older generation.

Just like the pioneering generation, new immigrants are working longer to send money to their families back in their native countries. Making money to keep one's family comfortable is a very important task to them, and new immigrants were happy that their partners worked. Worrying about the views of indigenous people is common across all participants; all felt that their native counterparts were much less stressed.

Religion was the core fundamental belief shared by all participants. The Christians being the newest South Asian group, had difficulty establishing themselves due to the lack of facilities. They found it hard to believe that churches were closing down in Western societies. They also had their last meal very late at night as compared to members of more established faith groups, who ate by 19 00.

Certain eating habits and inadequate exercise habits were known to be bad, but were still practised. There was poor understanding among newer and older immigrants about the 5-fruit and vegetable-a-day guideline provided by nutritionists. Some felt they could eat 5 fruits a day. Most newer participants drank alcohol and ate pork, because they thought it was a healthy white meat. However, they do not smoke as much when compared to the older generation who tend to think that smoking has no links to CHD.

Most of the older generation did not want to do exercise as they felt it wasn't appropriate for their age and the community lacked facilities and trainers. Participants felt that they had become more aware of the need to keep fit and healthy after migrating to the Western world.

Age also played an important role; most of newer immigrants believed that the onset of CHD was below the age of 40 in comparison to the older immigrants who felt that it was common for those above the age of 50. Racism was experienced by most of the participants in some form or the other. Newer participants were more sociable and found it easy to mix with the natives.

Most of the immigrants found it hard to get appointments with their GPs, whereas the

older immigrants felt that hospital stays were unpleasant because of the lack of care and the food which was not provided according to their religious needs.

Increased health awareness and a much more positive trend in their health attitudes and behavior was incorporated in the process of adapting to a new society, but in most cases health deteriorated due to the easy availability of foods high in saturated fats.

In the next chapter, I will discuss in detail, the overall findings of this study to the relevant literature by comparing and contrasting the participants' viewpoints. Then, the limitation of the study will be mentioned and finally the conclusion will be provided.

CHAPTER SEVEN

DISCUSSION

INTRODUCTION

This chapter discusses all the findings from the study in comparison with the available literature, up-to-date medical knowledge in the area of coronary heart disease, and current health service provision in the UK. In the previous chapter, the experiences and understanding of CHD held by older and newer migrants were presented. Reflecting on my journey with each of these participants, for me personally it was a once in a lifetime experience to share the knowledge and experiences faced by these pioneering men who travelled to faraway lands in search of a better life for themselves and their families. I hope this piece of research will inform future health promotion interventions and strategies and help to provide culturally sensitive care for this large, heterogeneous group. I have presented these findings in figurative form:

Tables 7.1, 7.2 and 7.3 highlight the different groups' understanding of the risk of CHD and the effect of psychosocial factors that have an effect on them.

Table 7.1 shows direct and indirect pathways towards CHD. The pathways are by no means mutually exclusive. Stress can exert an effect either directly or indirectly by influencing patterns of health behaviour such as diet, smoking, physical activity and smoking.

Table 7.2 shows the pattern by which older migrants believe that psychosocial stress affects the heart due to the South Asian way of life, joint family system, risk of losing their children, work and money and racism; these stresses act directly or indirectly on their health beliefs (concerning smoking, diet, physical activity and alcohol), and there is also the added stress of the health care system and other factors like climate that may have impacts on CHD.

Table 7.3 shows the pattern by which newer migrants believe that psychosocial factors such as being accepted, work and money and racism act directly or indirectly on the health behaviour/beliefs (smoking, alcohol, diet and physical activity) and the added stress of the health care system and other factors like age, has impact on CHD.

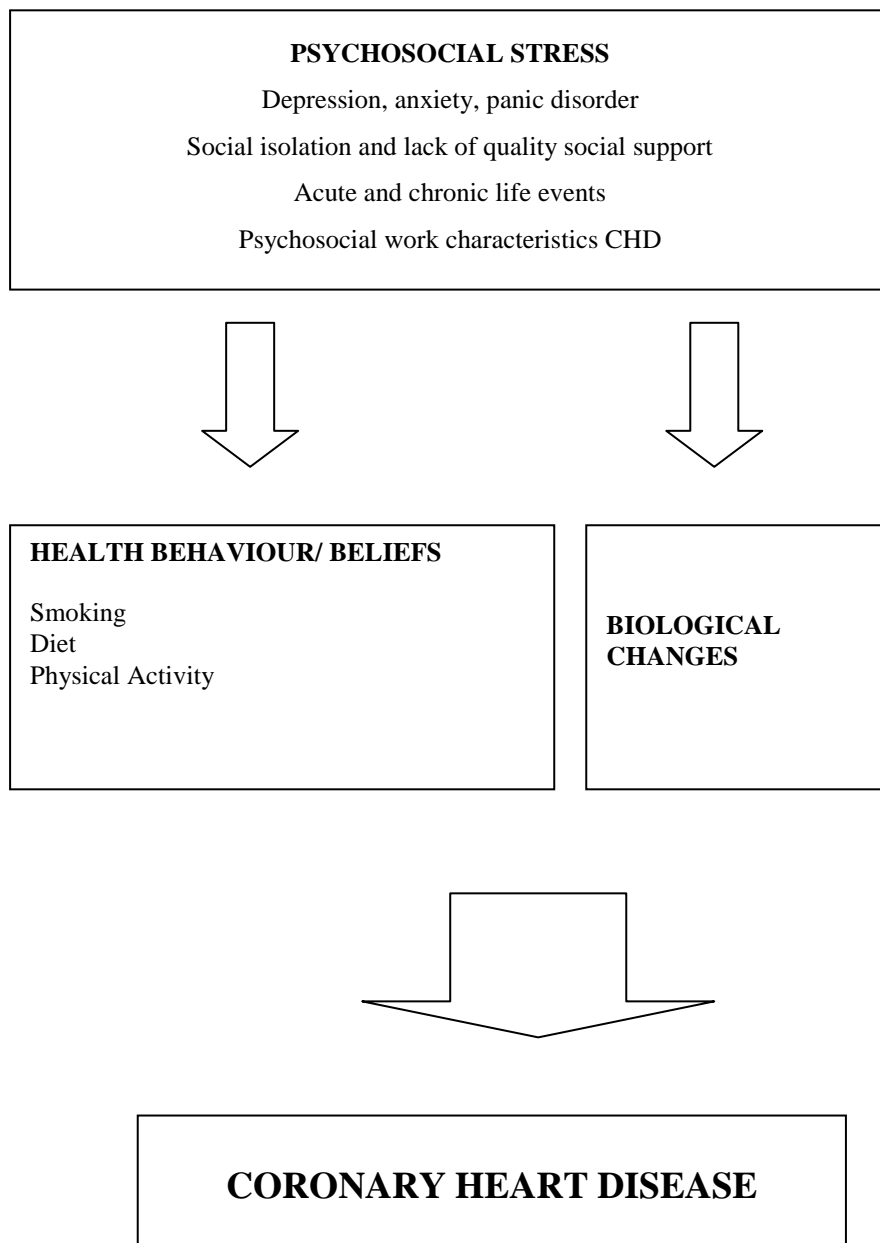


TABLE 7.1 Direct and Indirect Pathways to CHD (Marmot & Stansfeld, 2002)

Table 7.2 Older migrants' understanding of risk factors for CHD

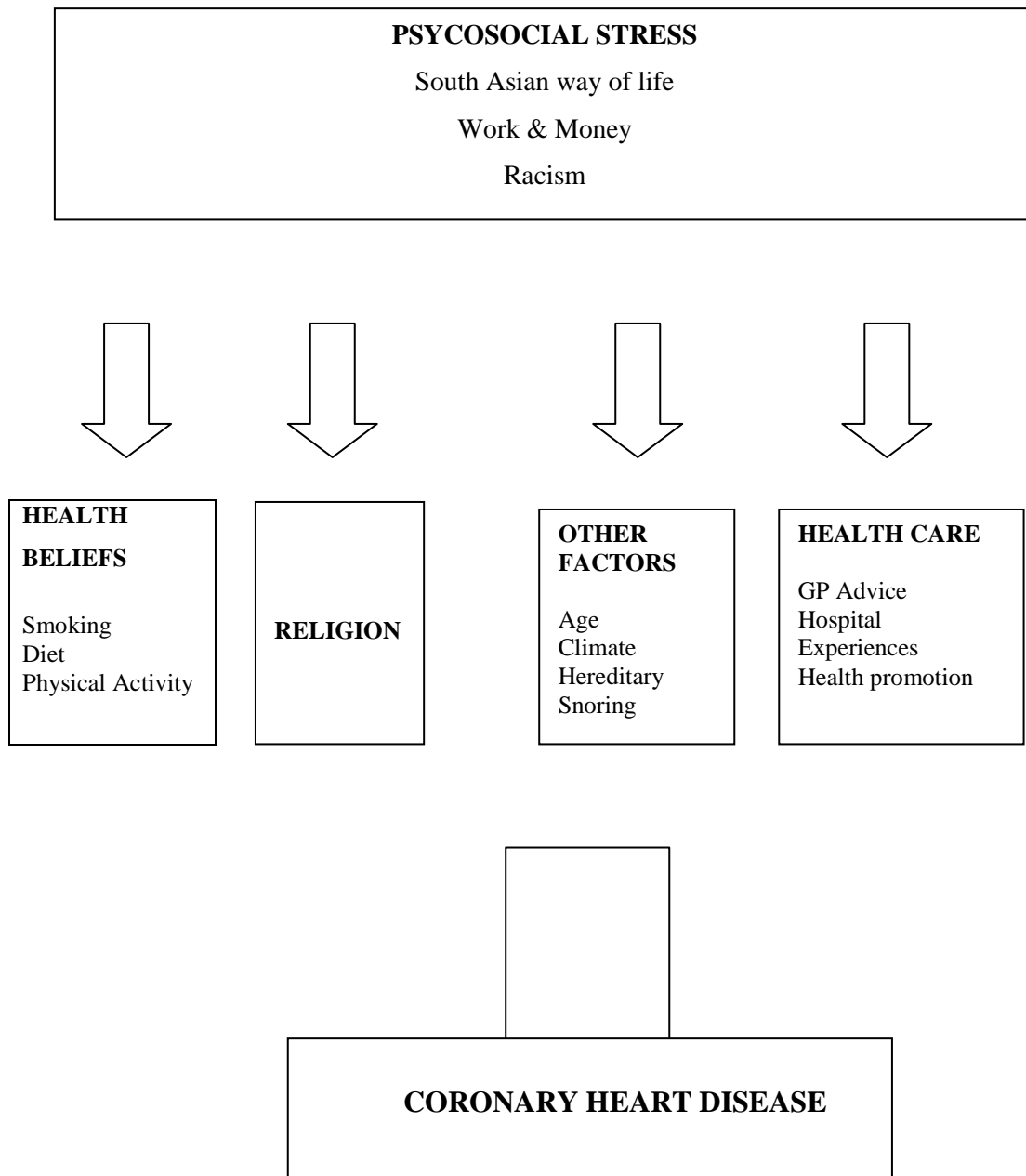
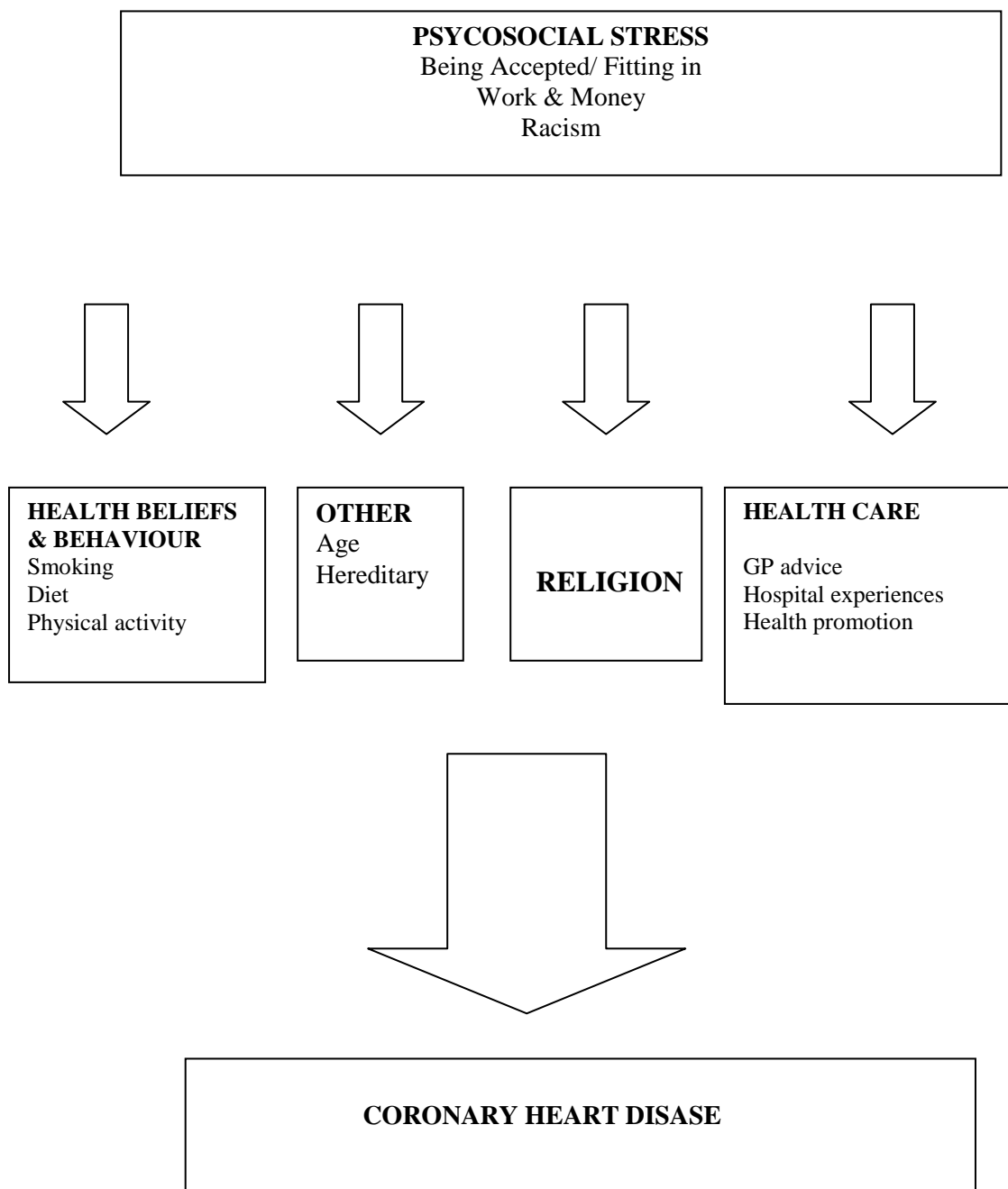


Table 7.3 New migrants' understanding of risk factors for CHD



PSYCHOSOCIAL FACTORS

According to Williams *et al.* (2009), people of South Asian origin in the UK and other Western countries have elevated rates of CHD. Psychosocial factors contribute to CHD, but there is limited information that links stress especially to South Asian Diasporas worldwide. Previous studies by Bahl *et al.* (2001) and Smith *et al.* (2000) highlighted the possibility of a link between CHD and stress, which was consistent with this study's findings. Kandula *et al.*'s (2010) study in the USA highlighted that over 40% of the participants believed that stress was major cause of CHD (compared to other known risk factors). This was consistent with the findings of this study, wherein over 45% of participants identified racism, lack of support and work-related stress as major contributing factors to CHD.

Studies by Farooqi *et al.* (2000) and Balarajan *et al.* (1989) opened up the debate of the possibility of stress being a major contributing factor to CHD among the South Asian population. Other studies have shown that pre-migration beliefs influence cultural adaptation during the acculturation process (Bhattacharya & Schoppelrey, 2003). This was clearly highlighted in the analysis chapter, in which the experiences and beliefs of newer migrants (Malayalam & Tamil) were totally different from what they had in mind of a Christian country (the UK). Bhopal and Marmot also shared similar concerns and were also perplexed by the morbidity rates between the Afro-Caribbean and Chinese communities, as they were significantly lower than those of South Asians. They wanted to know what makes South Asians vulnerable to CHD, and investigated whether the lack of clinical studies linking CHD and psychosocial factors (in UK) involving South Asians was the missing link in this complex puzzle (Hussain-Gambles *et al.*, 2004). Marmot and Stansfeld (2002) pondered "What if we round up all the culprits and they all come from the same gang?"

According to WHO-MONICA study (1994), if risk factors like blood pressure, plasma total cholesterol and smoking account for no more than half of the international variation in CHD mortality, what else could account for the remaining cases? As highlighted below in table 7.4, Bhopal (2008) discussed nine possible hypotheses that need to be taken more seriously, five of which participants in the study linked with CHD (psychosocial factors, socioeconomic factors, racism, genetic factors and access to health care).

High prevalence of diabetes	Accepted as partial explanation
Insulin resistance	Under rigorous test, with evidence of some limited explanatory value independent of diabetes.
Psychosocial factors increasing stress	Not tested formally. Evidence of potential relevance from cross-sectional studies.
Socioeconomic factors	Limited test in cross-sectional studies, but generally accepted not to fully explain ethnic group differences.
Racism	Not tested in the UK
Chronic inflammation	Not tested, with limited data at cross-sectional level
Adaptation	Some evidence from India
Genetic factors, and gene-environment interactions	Not tested in a systematic way.
Access and quality of health care.	Not tested in a systematic way.

Table 7.4 Hypotheses to explain ethnic variations in cardiovascular disease

The chapter has been laid out into three sections:

1. Effects of stress in the South Asian way of life.
2. Effect stress has on conventional risk factors like diet, smoking and physical activity.
3. The role played by health care professionals and the impact it has on the understanding of health education by both the older and newer migrants, and other factors.

SOUTH ASIAN WAY OF LIFE

For most of the older migrants, the South Asian way of life itself was stressful. Not only do they worry about their own family, friends and relatives in the UK, but also about extended family members back in their country of origin. Issues about immigration and legislation were also highlighted, which make it difficult for them to sponsor their extended family. Being the head of the family carries a huge responsibility. Cultural shock and isolation has led many of them feeling depressed.

South Asians not only differentiate between each other by their appearance, but also by the languages spoken, religion, caste, eating habits, dietary intake, pattern of migration, beliefs and values (Bhopal, 1999). Previous studies used country of birth as an indicator of ethnicity; this implies that those who were born in the UK are excluded. Among the South Asians in the UK, Indians are extremely heterogeneous, which makes findings differ from different places and communities. Even though Sikhs are not supposed to drink and smoke, there are studies that show a high prevalence of alcohol among this group. Bangladeshis are the most homogenous, having a single common religion and area of origin (Sylhet). Smoking is most prevalent among this group, along with low rates of physical activity. Among the South Asians, Bangladeshis are also the shortest (possibly a reflection of poor nutrition in childhood) and less obese, with lower mean blood pressure, although they have the highest diabetic rates. Findings from this study are similar to those of previous studies (Bhopal *et al.*, 1999; Nazroo, 1997; Johnson *et al.*, 2000).

The South Asian way of life is to try and make adjustments as often as they can so that they do not bring shame and dis-honour to the family. Results from the study suggested that the most of the older migrants found it difficult to make changes in their lifestyle, especially with year-round social events like weddings, religious festivals, birthdays and childbirth. For the sake of prestige and honour, they never refuse to eat or ask for any special dietary needs. The feeling of not troubling others was also mentioned numerous times. These views, which were clearly cited by Helman (2007), are cultural factors that play an important role in influencing one's beliefs perceptions and emotions. Findings from this study confirm previous conclusions that the South Asian culture and the concept of being South Asian had a huge impact on the participants' experience, understanding, beliefs and behaviour in relation to CHD. What this study highlighted is a deep sense of pride within the South Asian community whereby both the newer and older participants felt their culture to be unique. Similar findings were made by Farver *et al.* (2002) on the Indian community; participants in that study talked about the feeling of 'Indian-ness'. This study fills in the gaps in existent literature concerning the influence of deep-rooted beliefs and health behaviour on understanding of CHD.

Williams and Hunt (1997) highlighted the levels of stress faced by South Asians, particularly regarding factors such as overcrowded housing and a significantly lower

standard of living compared to indigenous groups. In a study in Somerset and Avon, angina, myocardial infarction (heart attack) and stroke were all more common among individuals living in deprived areas as compared to those living in more affluent areas (Eachus *et al.*, 1996). Studies by Davey *et al.* (1996) also found a strong inverse association between the income levels of the area of residence of men and their risk of mortality from CHD and stroke. Most of the participants (older and newer immigrants) in this study lived in deprived areas. One of the major reasons for newer migrants to live in areas with larger South Asian communities was easy access to shops and groceries. This kind of living pattern is observed not only in the UK, but also in most industrialized countries where there is a large South Asian presence. Barakat *et al.* (2001) found that South Asians are more likely to live in areas with increased social and economic deprivation; however, second-generation South Asians typically tend to move to more affluent areas. This affects older migrants because of the consequent weakening and break-up of the traditional joint family system; they feel that they have lost control over their siblings, have fewer opportunities to see their grandchildren, as that they are abandoned by and isolated from their children, leading to the ultimate fear that they would ultimately end up in a care home (a taboo issue in South Asian culture, as discussed previously).

According to Modood (1994), older South Asians feel much lonelier and isolated, which could lead to their low self-esteem. Pollard *et al.* (2003) highlighted that there is a link between social isolation and CHD. Even though South Asians had larger families and networks, there was less socializing among them as compared to the White communities.

Close-knit families and communities play a vital role in extending the social support network (Williams & Hunt, 1997), and those with nobody to turn to are more likely to be distressed. These patterns are likely to change in the UK-born generation, where more households are located near the wife's parents. There is also the question of whether social relationships are positive or negative for the parties concerned. In the Whitehall study, South Asian civil servants more often had negative social relationships (though men had more confiding support). They also had less social support at work (Hemingway *et al.*, 2001). Though most of the older participants in the study had strong links with their host country, they expressed hopelessness about their own future and emphasised the importance of their children's success.

Hemingway *et al.* (2001) highlighted an inverse social gradient and an adverse pattern of exposure to psychosocial factors, similar to the studies of Nazroo (1997) and Bhopal *et al.* (2002), which highlighted the correlation between social class and CVD (where the majority of South Asians worked in low-paid jobs).

In the Whitehall study (Davey *et al.*, 1990), not owning a car was associated with a 49% higher risk of all causes mortality compared to owning a car. Findings from the study showed that most of the older (except the Bangladeshi) and newer participants did own a car. According to Hemingway *et al.* (2001), in the Whitehall study, South Asian civil servants were more depressed than white civil servants. Other factors, which are also linked to stress, are honour and prestige in society, fear of losing their children (older migrants), the overall migration process, lack of family support and barriers to free access to religious establishments (new migrants). These points were also highlighted by other studies (Bhopal, 1986 & 1988; Jan & Smith, 1998; Uba, 1992).

For the older migrants, the fear of losing their children was the constant reminder and regret of migrating to Western countries. What they feared the most was their children picking up ‘Western’ habits, however, Kakar (1996: 150) highlighted in his book that second-generation children were in fact seeking their roots and were proud of their identity:

Many migrants ... are surprised to find that the issue of cultural identity has not disappeared. They have only skipped a generation ... sons and daughters ... have become preoccupied with their cultural roots as part of their quest for a personal identity.

Marriage is considered to be sacred within the South Asian community. All the older migrants got married through the arranged marriage system at a very young age, whereas newer migrants either had a love marriage or met their spouses through internet marriage sites (e.g. www.shaadi.com). Divorce was seldom among the older migrants compared to the second-generation, in which it was increasing at an alarming pace. Some practices never change with age; Helweg (1979) highlighted that on numerous occasions, the older participants mentioned that they knew of friends and relatives who suffered chest pains when they came to know that their daughters were having pre-marital affairs, as this would bring shame and disrespect to

the family. This is important for social policy, especially during wedding seasons. Even gender roles have begun to change, as more and more women are educated and take up jobs outside their homes, which has changed family dynamics in communities like the Indian (Gujarati and Sikh), where the men were much more open to their spouses working, whereas Pakistanis and Bangladeshis felt that it was the duty of the head of the family (i.e. the male breadwinner) to earn a living. Findings from the study have shown not only that some of the participants took it personally as a matter of pride in not asking their women folk to work, but they also regretted migrating to the UK because some of the girls with higher education were either getting married later or not getting married at all, whereas indigenous girls tended to married once they completed higher education. These findings were similar to those of Merali (2009), however Ghuman (1999) opposed the interference of the older migrants in every aspect of their children's lives, as they are mature and educated enough to make right and wrong choices for themselves and face the consequences of failure.

The lack of role models in all aspects of life was a concern for the older participants in the study. They feared that there was no one for the younger generation to look up to for inspiration and guidance. Parker-Jenkins (1995) talked about the lack of ethnic minority teachers in schools where 70-80 per cent of the pupils were from a non-white background. Older participants felt that the younger generation found it difficult to balance their two different lives. Sports like football have not produced any South Asian role models. Even though Amir Khan won silver in the Olympics, the community cannot see him as a role model as boxing is not very popular in comparison to cricket and football.

RACISM

Social issues are not linked to just one physiological pathway, but to various scattered pathways that could be known or unknown. Early researchers like Marmot *et al.* (1984) and McKeigue *et al.* (1989) were intrigued by the rise in CHD within South Asian communities in the UK and wanted to know if racism, poverty and stress had any connection with CHD. Between 1960-1990 there were few studies involving South Asians, and the social gradient system was not functional because during this period South Asians worked in jobs that may not be their chosen profession, nor was there any link between psychiatric distress and South Asians. Studies in the past

combined all ethnic minorities in one group; in addition, more emphasis was given to the Black Caribbean population (Williams *et al.*, 1998). Both the new and the old migrants experienced different levels of racism, and felt that there was a connection between it and CHD. They talked about racism and how it affected them. For the newer immigrants, the feeling of not being accepted within the South Asian community was very stressful. According to Williams *et al.* (1994), social isolation may lead to increased anxiety and depression. Barefoot *et al.* (1983) showed that positive social relations may boost self-esteem, reduce anxiety, and increase perception of control over the environment; however, most of the newer and older migrants felt a great sense of neglect and isolation. Bosma *et al.* (1998) found that hostility is related to high effort and low reward, and this combination in turn predicts CHD. Harding's (2003) ONS Longitudinal Study showed that downward job mobility predicts a higher risk of limiting longstanding illness in South Asians and West Indians than in other communities included in the study.

Racism in Health Care

A number of studies suggested that obstacles to care of heart disease that falls under the broad heading of racism. Shaukat *et al.* (1993) found that the time from the onset of angina symptoms until referral to a regional cardiothoracic centre was found to be ten months longer in Indian-origin patients than in European patients matched for age, sex and extent of coronary disease. This raises the question of whether the reason for this is due to patients' illness behaviour (e.g. interpretation of symptoms) or to the clinicians' response. Another study by Chaturvedi *et al.* (1997) found that Hindus and Sikhs actually report greater likelihood of seeking immediate care for angina symptoms compared to the white community.

RELIGION

According to Johnson (2004), religion plays an important role in the lives of migrant South Asian populations in the UK. South Asian religious traditions and beliefs have changed the religious landscape in many societies where they have settled. Holy places have become a place of power struggle for older migrants with links with the Subcontinent. For most of the participants in the study, religion had a huge influence in their day-to-day life. Older migrants and their children (second generation) have become citizens of a nation that allows a large measure of religious freedom. What

happens in the outside world has huge repercussions within Britain (e.g. the Salman Rushdie affair). Factors such as destiny and *karma* were discussed on numerous occasions by the older migrants, who believed that there was a link with CHD (especially Hindus); this is consistent with the report by Juthani (2001) who reported that within the South Asian community there are lay beliefs about *karma*, ill wishing by another person and the evil eye.

Caste played a crucial role in deciding a suitable partner for marriage and social status within society. Even though the caste system was officially abolished in the Subcontinent, it is still widely actively practiced within certain groups (even among non-Hindus). The main desire is to forge an alliance with those with similar status in society, or families who share the same caste. Some of the participants in the study were more religious than others. Among Hindu participants, the concept of *karma* seemed to be a deeply held belief. Some of the participants also felt that not following their South Asian lifestyle could also be linked with CHD. According to Ballard (1994), the Gujarati-speaking Hindu Diaspora has the biggest caste network, including in the developed world. Superstitious beliefs are common among older immigrants, especially among Gujarati Hindu participants, such as belief in omens (e.g. a black cat crossing one's path) and the influence of the cosmos on health. For the newer migrants, the feeling of not being welcomed by either their South Asian community or the indigenous community was the biggest cause of concern; the feeling of social isolation and segregation. Similarly, for participants in this study, South Asian culture had a huge impact on the CHD experience, and their understanding, beliefs and behaviours in relation to CHD.

For the older Sikh participants, their biggest concern was having their own *Gurudwara* based on their caste system. Even though Sikh religion prohibits differentiating people based on their caste, it is widely practiced in the UK (like in the *Ramgarhia* Sikh Centre). The older migrants were also stressed because the food served in the *langhar* was not healthy. There was also a growing concern among the Sikh participants about alcohol being served within community premises. There were differences and issues between members of different castes within the community; most of the East African Sikhs were from the *Ramgarhia* caste, traditionally artists, whereas the *Jats* were landlords.

One of the biggest issues faced by Muslims was a lack of leadership. Most of the imams who came from Bangladesh and Pakistan were trained in South Asia and spoke little or no English. This was stressful for some of the participants, as community leaders could not relate to the younger generation. Community leaders and link workers need to be involved when assessing CHD prevention programs, and their feedback is very important to make changes.

WORK AND MONEY

Religion not only has an effect on CHD; it can also play an important role on the kind of work people have, and their coping measures when unemployed. Creed *et al.* (1999) and Shams *et al.* (1993) clearly highlighted that different religious groups have different levels of stress and coping measures inbuilt within them. CHD in most industrialised countries is now more common in lower socioeconomic groups. Different studies related psychosocial stress and CHD, namely the Swedish Case Control Study and the Stockholm Heart Epidemiology Programme (SHEEP) and the Whitehall 2 project investigated the role of psychosocial stress and other factors in the development of myocardial infarction. Karasek and Theorell (1990) highlighted that there is a correlation between work and psychosocial factors. Williams *et al.* (2007 & 2009) highlighted that within the various South Asian groups, stress and social deprivation was at the highest level. In another study related to South Asians, Kuper and Marmot (2003) clearly highlighted that the jobs taken by this ethnic group are usually linked with low decision-making and high demand, which also increases the risk of CHD. Other studies (Siegrist, 1990; Siegrist & Weber, 1986) also linked this characteristic with the wider population.

Low job control has been shown to increase cardiovascular mortality (Marmot *et al.*, 1997). Poor socioeconomic conditions early in life and low education restrict the range of occupations available to South Asian immigrant communities. In the West of Scotland Collaborative Study (Davey *et al.*, 1998), social position in childhood and CHD risk in adulthood were examined, by analysing conventional risk factors in relation to fathers (childhood) and self (adulthood) showed a 50% higher risk in men whose fathers were in manual occupations compared to those with fathers in non-manual jobs. This finding resonates with the participants in this study, as most of the older participants worked in hard and low-skilled jobs.

Most of the older migrants (and some new migrants) worked long hours and irregular shifts before their retirement, in some cases anywhere between 60-100 hrs/w. Similar findings were also noted by Peter *et al.* (1999), who linked long working hours with CHD. Studies by Siegrist *et al.* (1990) and Bosman *et al.* (1998) also highlighted that when an effort-reward imbalance takes place (i.e. concerning career opportunities, salaries, and job security), the risk of CHD is roughly six times more. Participants in the study, especially the Bangladeshis and Pakistanis, felt that they were forced to retire and no training was offered to them to retrain when industries were shut down.

According to Marmot *et al.* (1997), those in higher positions had a much lower chance of being affected by CHD. Results from the study clearly highlighted that both the older and newer migrants (including university graduates) were working in low paid jobs and were not very happy with the working environment they were in. Niedhammer *et al.* (1998) highlighted the relationship between psychosocial work variables and CHD risk factors.

Most of the newer migrants worked longer hours in jobs that were not related to their professions and did not feel appreciated. This was similar to another study by Hemingway *et al.* (2001) on civil servants, which found that South Asian civil servants experienced more effort/reward imbalance and have higher hostility levels than white civil servants, and South Asians have less job control than whites, attributed to the fact that they have lower job grades. However, at each job grade, South Asians generally have higher educational qualifications than whites.

GENETICS

As mentioned earlier, Bhopal and Marmot were trying to understand why South Asians had a higher rate of CHD than the black or Chinese community, and one of the factors they proposed was genetics. Participants in the study, especially newer migrants, linked CHD with genetics (hereditary causes), however, there is a paucity of studies on genetics of CHD in South Asians (Hussain-Gambles *et al.*, 2004). Some of the reasons could be health promotion issues like languages used and the perception within the community (the information provided might be insensitive to culture and religion). Benefits of participation may not be clear, and the word itself ('genetic') may have consequences to families with regard to stigma within a relatively closed community (e.g. regarding matrimonial prospects).

OTHER ISSUES

Media played an important part within the Diaspora. As one of the new migrants told me, he only watches programs in his native language (Malayalam), and came to know about the London bombing on the 7th of July, 2004 through Indian news media. The BBC caters for the South Asian license fee payer by showing Bollywood movies, and the popular series *Mahabharata* and *The Kumar's at No 42* were pioneering efforts in South Asian-themed broadcasting in the UK. Other movies which have been popular are *Bhaji on the Beach* (1993) and *Bend it like Beckham* (2002), which reflected the lives of South Asians in the UK (Bhugra, 2005).

Seasonal changes have links with CHD (Mustad *et al.*, 1996). Participants in the study believed that reductions in sunlight and the effects of shorter days and longer nights were stressful. This was supported by Gerber *et al.* (2006), who showed that there was a link between sudden cardiac deaths and changes in weather. Some of the older participants in the study (Gujarati Hindus) believed that climate change would have an effect on CHD. Douglas *et al.*'s (1995) study in Scotland showed higher hospital admissions in spring for those below the age of 45, and in winter an increase in admissions of older patients. An earlier study (Douglas *et al.*, 1990) showed that CHD deaths were higher in June/July/August and lower in December/January/February, and Morris *et al.* (2001) highlighted that different regions in the UK have different levels of mortality.

Gujarati Muslims believed that there is a link between home heating and CHD. This was supported by Mackenzie *et al.* (1997), who observed that constant exposure to heating at home had an effect on the body's thermoregulatory system, which was linked with CHD.

Age played an important role in the prediction of CHD. Both the newer and older migrants had different understandings of the age at which people get affected. 3/83 participants believed that age plays an important role in CHD. Most of the South Asians participating in health studies are from the age group of 40-69 (e.g. Brunner, 2006). The newer migrants believed that those below the age of 35 can be affected, whereas the older migrants believed that chances of suffering CHD are more greater over the age of 65.

HEALTH BELIEFS & HEALTH BEHAVIOUR

According to Ali et al. (2006), culture not only has a huge influence on beliefs, behaviour, perceptions and emotions, but also on health-seeking behaviours. Andersson (2006) highlighted that there was a discrepancy between perceived risk and the actual risk of CHD, which could explain why there was a lack of motivation to adopt healthy behaviours among the older participants. The majority of the participants in the study were fairly knowledgeable about CHD risk factors and also the detrimental effect of unhealthy diet and lack of exercise. What was unique from the findings was that the older participants did not believe that CHD affected them in any way. They were proud of their heritage, culture and their lifestyle. What they wanted was no or minimal interference from the government so that they could continue living the way they have been doing for many years.

According to Backett (1992) and McAllister and Farquhar (1992), health beliefs are seen as a way of understanding and making sense of one's body. They vary according to socioeconomic and ethnic group. Lay health beliefs have an effect on the health education messages transmitted to the public, because for some people they are confusing (Bury, 1994). According to Kasl and Cobb (1966), health behaviour is defined as an activity undertaken, or not undertaken, by a person for the purpose of detecting or preventing a disease, which varies according to the level of education, ethnicity and socioeconomic status .

No single model (HBM, Self Efficacy Theory or Health Action Model) has universal applicability for all the changes in health beliefs and health behaviours (Vetter, 1991), as all these models attempt to predict the likelihood of change in any time. According to Nazroo (1997), structural factors outside individual control have an effect on one's health beliefs and behaviour (levels of income, employment prospects, housing, effects of racism). Since individual patterns of change vary across cultures, any health behaviour change intervention needs to be tailored to particular population groups and should be culturally and socially sensitive (Kelly, 2005) To instigate any process for any given model a trigger is needed, either internal (sickness) or external (health promotion campaigns), or both. According to Kelly (2005) behaviour and behaviour modifications are significant in the lifestyle modifications of CHD. Among South Asians, the high prevalence of CHD is linked with human behaviour. Results from the

study clearly highlight that many of the participants (older) did not exercise their lifestyle choices in ways that are beneficial to health.

The majority of HBM studies are conducted in the USA and very few studies have been published linking South Asians to Health Belief Model (Ahmad, Cameron & Stewart, 2005). HBM plays an important role in the explanation of health behaviours, but cannot account for social, cultural and environmental influences on individual health beliefs.

DIET

According to the Second Health and Lifestyle Survey, 2000:

(A) Nearly 47% of Indians, 53% of Pakistanis and 54% of Bangladeshis perceived their traditional diet to be healthier than the Western.

(B) Knowledge of the links between CHD and diet was poor among all participants.

(C) There was very low perceived understanding of the terms 'starchy food', 'dietary fibre' and 'fat'.

(D) Dietary restrictions on the bases of religion/culture were reported by 71% of Indians and 97% of Pakistanis and Bangladeshis.

(A) These results echoed study findings. Rookus *et al.* (1988) and Van Stres *et al.* (1986) highlighted that there was a correlation between weight gain and negative life events. The older participants felt that there was a lot of bad press and publicity about South Asian cooking, but according to C3:

If curry is the food of Britain, how can it be voted as the worst?

Most of the older participants talked about the difficulties they have in changing their lifestyles (especially diet) because of year-round festivities and family events. Similar findings were also reported by Enas and Senthilkumar (2001).

Participants believed that the South Asian culture and lifestyle was part of their identity and played a very important role in the development of heart disease. An unhealthy lifestyle was accepted as the norm of South Asian culture and was practiced by most of the participants in the study. Anderson *et al.* (2003) clearly highlighted that the understanding of nutrient intake within minority groups is always difficult. Between South Asian groups there are huge differences between the kinds of fatty acid consumed. Studies by Miller *et al.* (1998), Reddy and Sanders (1992) and Landman and Cruickshank (2001) have discussed vegetarian diets containing high proportions of linoleic acids and very little or no content of n-3 fatty acids in detail.

According to Steptoe *et al.* (1998), stress may influence health through adverse changes in diet. All the participants agreed that cooking many dishes consumes a lot of time, and in some cases they may not be able to taste all the dishes. However, they still continue with the traditional way of cooking which consists of chapattis/rice, dhal, *sabji* (side dish of two vegetables in case of no meat), curd and sweet.

(B) A study by Kittler and Sucher (2001) demonstrated that participants in their study could cautiously or unconsciously follow their cultural eating habits just to maintain identity with their groups. This was similar to the findings of this study, wherein both the older Sikhs (especially Jat participants) would continue to eat meat and drink alcohol to maintain good drinking partnership (in spite of knowing that religiously it is not permitted), and the newer (Malayalam speaking) would eat a lot of fried foods (called bites/snacks) during drinking sessions just to maintain a sense of machismo within their group.

Results from this study have shown South Asian cooking is very diverse; each region has its own cuisines with distinctive styles and tastes. Punjabi cuisine is mostly curry-based, with a liberal use of *desi* (home-made) ghee butter and milk, as compared to the southern (Kerala and Tamil) style, which is also curry-based but rarely uses ghee and butter, but which makes extensive use of coconut. Southerners and Bangladeshis use rice as their staple diet, whereas northerners use flour (chapattis/nan bread).

Adler and Mathews (1994) elaborated why some people get sick while others are healthy. Obese or unhealthy individuals are mostly emotional or comfort eaters (Rand & Stunkard, 1978). Steptoe (1991) and Adler and Mathews (1994) highlighted the

link between stress and changes in one's behaviour (diet), which has an overall impact on health.

The newer migrants believed there was a strong link between CHD and cooking, in contrast to the findings from the Health and Lifestyle Survey (2000), which revealed little or poor understanding of the risk involved with CHD. For example, participants felt that the onions sold in the UK were the white variety, whereas they believed that the red variety common in the Subcontinent absorbed less oil. This clearly highlights that the newer immigrants have heard campaign messages but not understood clearly. More focus needs to be on making the message simpler and also using examples with traditional foods so that immigrants can easily relate to that. Both the older participants and newer participants felt that there was a lot of emphasis on the food labelling and educating people from the wider community. However, none of them knew how to read the labels on the products when they shop in bigger supermarkets. Shopping in corner stores is rarely cheaper, but participants still preferred to shop in these places because they can get all the speciality ingredients which are not commonly available in major supermarket chains, such as certain spices (including fresh ones), South Asian vegetables, pulses and oils.

(C) Evidence from the analysis has highlighted that older migrants find it hard to make changes to their dietary intake due to religious beliefs and obligations. Newer migrants who were willing to experiment made changes and try new cuisines, but older participants such as Sikh and Gujarati Muslims were not very keen to make changes in their lifestyles. One of the main reasons not to change was the fear that this might compromise the taste. Christians were the only participants that ate pork. A Sri Lankan respondent said he ate pork because he had been taught that pork was a white (healthy) meat, as recommended by the government:

They say in white meat there is less fat, pork has less fat and mutton more lamb, okay, mutton more fat (S3).

(D) The Sikh and Gujarati participants, who were vegetarian, assumed that the food they ate was very healthy. Studies have shown that a vegetarian diet contains low amounts of vitamin B 12, which can increase plasma homocysteine concentrations (HCY), and studies have shown that plasma HCY is higher among South Asians in the UK than the indigenous population (Obeid *et al.*, 1998; Chambers *et al.*, 2000),

which could increase the risk of CHD.

For most of the participants in the study, the discussion on diet was very important. Type of food eaten depends on country of origin, religious upbringing, affordability, beliefs and dietary needs. Eating habits and nutritional behaviour are culturally defined and are established early in one's life. The participants in the study migrated from different parts of the world. Some were twice migrants, the majority came from the Subcontinent and a few were thrice migrants. The only commonality they shared was being South Asians; their religious beliefs were different, acculturation varied from group to group and diets were based on the areas where they originated initially. These findings are similar to those of Ventegodt *et al.* (2003) and Fieldhouse (1995), who found that the dietary habits of the South Asian population are relatively diverse and are influenced by religious beliefs as well as areas of origin.

Studies by Amsterdam *et al.* (1987) have shown that there is a correlation between stress and taste perceptions; these findings resonate well with this study's findings, whereby most of the older migrants did not want to make changes regarding diet even though they knew the benefits of healthy eating, because of the lay beliefs that it meant giving up part of their heritage/culture; similar findings were also highlighted with the African American community (James, 2004).

Diets high in saturated fats exacerbate insulin resistance (Vessby *et al.*, 2001). The older participants mentioned the liberal use of ghee, full fat milk and regular consumption of sweets. The kind of oil varied between groups. New migrants used coconut oil in their cooking whereas older migrants used vegetable oils like corn and sunflower oil. It is hard to estimate the dietary intake within the South Asian community because of no reliable food composition data. Oliver *et al.* (2001) observed that 'stressed' eaters eat more foods high in fats than unstressed eaters.

In another study by Wardle *et al.* (2000), participants with a high workload tended to eat diets rich in sugar and fat. There were differences between the newer and older immigrants. Newer immigrants preferred to eat late at night, whereas the older immigrants ate before 7 pm. Before moving to the UK from Africa, most of the older immigrants ate their main meal at lunchtime and had a lighter option at night. After moving to the UK, initially they had taken their staple diet to work which contained curry, chapatti and *shabji*, but the fear of being alienated by the indigenous

community (because of smell) they now take sandwiches to work (which they are not happy about), and come back home and have their hot meal in the evening. Some of the older participants were used to having a short nap during the day, but after migrating to the UK they found it difficult to practise this.

Results from the study have also highlighted that there is a difference in the quantity of food prepared between the newer and older migrants. New migrants have smaller families and have partners who work, thus cooking large amounts of food is not feasible, whereas the older migrants cook in larger quantities as they have larger families and their spouses do not work.

Hu and Willett (2002) found a relationship between lower intakes of long-chain n-3 fatty acids and increased risks of CVD. Health promotion needs to be targeted according to the fish eaten by the groups. Bangladeshis do not like oily fish as they find it sweet and soft, and telling them that salmon is good for CHD does not really help (they call it 'English fish'). Sri Lankan Tamils eat king fish and tilapia, while participants from Kerala preferred *Aaela* and *Mathi* ('mackerel' and 'sardines'). The usual way of preparing fish also varies from deep frying to curry, but oven baking was disliked by most participants.

Knopp *et al.* (2000) showed that general advice on diet helps in the reduction of total fat intake. Health promotion needs to target these issues. What most of the participants also highlighted was that the food items imported into the country do not have to meet the same guidelines as other locally produced items. They feel that the government is not worried about their health needs. This was clearly justified by the COMA panel (DOH, 1994), which made recommendations for the prevention of CHD, but did not pay particular attention to the needs of South Asians. Studies by Ludwig (2002) and Frost *et al.* (1998) highlighted the importance of a balanced diet and the benefits of consuming foods with low glycaemia index. According to the older migrants (Gujarati), making changes to one's lifestyle is a waste of time and effort, because everything is controlled by fate and destiny (*Karma* and *Dharma*), whereby the moral significance of one's past actions are understood to determine health and well-being. Health promotion needs to be tailored and sensitive to target groups where there is very little or poor understanding of the risk factors for CHD.

Booth (1995) showed that there is a link between learning and changes in one's habits. Newer migrants showed much more awareness of the food labelling, but still preferred not to make changes because they were worried that it might affect the taste, and were willing to make changes if cost was a factor. They knew about preservatives and E numbers, and mentioned that imported food had a lot of these ingredients that may not be found in locally produced items. For example, a Tamil respondent said:

When we buy products here [UK] it is crystal clear the amount of product of salt, sugar *et cetera*; in your place [India] it is packed and other things are not there [date] (T4).

Most of the food that is imported and found in South Asian stores is labelled for the American market. Most of the food items have the amount of fat mentioned, but not saturated fat. Additionally, sugar counts are normally enfolded in the umbrella of 'carbohydrates', which disguises the sugar content of food. There is also confusion about the mention of 'zero cholesterol'. Participants in the study expressed their concerns about the mixed messages that they receive regarding fat intake. Some of the participants were not sure about totally reducing the amount of fat, and did not understand the difference between saturated fat and cholesterol. Sikh and Gujarati participants suggested that they are constantly told what to do and eat, when the indigenous community eat more 'KFC' and 'McDonalds', whereas the Muslims believe that the kind of meat they eat is less fattening compared to indigenous people, who eat pork. This for them is very stressful, as no effort has been made by the government or local indigenous communities to help them try and learn English cooking. According to Shepherd (1990), foods are chosen not only for their flavour, but also for the cost, availability, convenience, perceived health promotion and religious understanding. Cost plays an important role for both the new and older immigrants. They did not understand why if something was good it was normally expensive. Compared to the newer immigrants, older ones had larger families and found the cost of healthier options very expensive. They always had to compromise between cost and taste, and generally the latter always won, as B6 mentioned:

The quantity we use is not possible, you get 5 litre of olive oil for £15-20, and you can get 25 litre of vegetable oil for £7.50. When you bring the small bottle of oil [olive oil] and you pour half of it in one curry, we need oil and we are always cooking.

For the new and older immigrants, migration has seen a lot of changes in the way they eat, especially with ready-made microwave meals. As most of the new migrants work, finding time to take care of children, work and also help with shopping and cooking is very tedious and time-consuming. Most of the newer participants prefer food that can be made ready in a few minutes.

Health promotion campaigns need not only to be flexible and to explain why some oils are healthier than others; they also need to be tailored to the needs of the community and understand as to why some groups use certain oils for certain reasons. For example, the new migrants believe that olive oil is good for the skin colour and texture, but the notion of cooking with it is alien to them.

SMOKING

Previous studies have clearly highlighted that smoking is a major cause of CHD among the South Asian population. Studies by Jarvis (1994) and Marmot and Wilkinson (1999) highlighted the close association between smoking and deprivation.

According to the Second Health and Lifestyle Survey (2000):

- Smoking rates between South Asians varied significantly, even though they might be same or in some cases lower than the wider population.
- 49% of Bangladeshi, 24% of Pakistani and 15% of Indian men smoked cigarettes.
- $\frac{1}{2}$ to $\frac{3}{4}$ of South Asians wanted to stop smoking.
- Most of participants linked lung cancer with smoking, not heart diseases such as CHD.
- Chewing tobacco was high among the Bangladeshi men, and around 33% of those who smoked complemented this by chewing tobacco.
- Knowledge of the health risks linked with smoking is poor.

Some of the reasons as to why the quit rates among the older South Asians were low are:

- Low self-esteem.

- Poor socioeconomic conditions.
- Social acceptability of smoking.
- Low awareness about smoking cessation options.
- Low awareness of the addictive effect of smoking.
- Low awareness of the addictive effect of *paan*.

These findings from the study were similar to those of Bush et al. (2003).

The Health Survey for England (1999) showed that the indigenous population has the highest quitting rates for smoking, but most South Asians do not use smoking cessation services. Health promotion programmes need to be tailored to individual groups. Bhopal *et al.*'s (1999) study clearly highlighted the heterogeneity of these groups. Most smoking cessation services have failed to increase South Asian quitters. This was clearly highlighted from the results in my study; Pakistani participants and Gujarati Muslims not only believed that there is no link between CHD and smoking, but also blamed the Government for the double standards shown to their community for the lack of health information.

Smoking was a taboo subject for some groups (Sikhs). According to Johnson *et al.* (2000), knowledge of smoking as a risk factor is poor among South Asians. This evidence was clearly justified in the study through differences between religious groups and also between the older and newer migrants. Most of the Sikh participants did not believe that there is a link between smoking and CHD, as the majority of the older generation of Sikhs did not smoke because of religious reasons. They also believed (*Kathri and Ramgarhia*) that passive smoking could affect their children, because they mix with the other white children who they believe to be a bad influence on them.

Since the release of the White Paper- 'Smoking Kills' (1998), the Government made sure that every PCT had a smoking cessation service so that individuals could get help in quitting smoking. Results from the study highlighted that participants could not relate to the advisor and felt that NRT (Nicotine Replacement Therapy) did not help in any way. Quit rates in smoking are always higher when there is a combination of NRT and intensive support (West *et al.*, 2000).

Bush *et al.* (2003) highlighted that high rates of smoking in certain groups (Bangladeshi and Pakistani) could be attributed to social acceptance in these groups. Women smoke in these groups, and most of the older men believed that there was no link between CHD and smoking because of the growing number of friends and family who have smoked all their life and lived longer than those who have not smoked. Others (Pakistani and Gujarati Muslims) blamed the Government for the lack of transparency in providing the right information. Some of the participants served in the armed forces, where smoking was encouraged because of the weekly offer of free cigarettes and alcohol. Bangladeshi men did not see the link between eating *paan* and CHD. They eat *paan* because they feel it is healthy, and a form of vegetable or fruit. This clearly highlights that participants are listening to Government campaigns, but interpreting them in their own way. They also felt that if there was a link between *paan* and CHD, this would be due to the quality of the leaves.

Most of the new migrants did smoke in the past, but after they moved to the UK they quit for various reasons (mainly cost).

According to Jarvis *et al* (2003) & Jarvis (1994) based on the General Household Survey, smoking is closely associated with deprivation, especially in those who are unemployed, with low levels of education and in social class groups 4 and 5. These factors are also higher among South Asian populations (Nazroo, 1997). According to Schoenborn *et al.* (1993) there is a close co relationship between smoking and stress, as those with difficulties in life tend to smoke. Smoking is a main indicator of deprivation, social class and unemployment (Jarvis, 1994). Family background and education may influence the initiation of smoking, while adult occupation and income may affect the age of stopping smoking (Van de Mheen, 1998). Smoking in adulthood is related to a childhood experiences including sexual health, parental experiences or divorce and growing up with a substance abusing, mentally ill member and could also influence future health status (Anda *et al.*, 1999; Taylor *et al*, 1997).

One of the first steps that need to be taken is to bridge the gap between healthcare and South Asians by using media, places of worship and social networking. Some projects have been working with South Asians. Project *Dil* in Leicester has been training community workers covering diverse health issues and the Asian Quit line, with the help of the British Heart Foundation, has been working actively to help to promote

awareness within the community. Quit Ramadan Campaign reaches out to the Muslim population in the UK. They use the help of Imams, Ramadan radio stations, Sunrise radio, posters and campaigns to spread the message of smoking and its side effects, and to encourage people to use the Quit line number. However none of the participants mentioned this campaign.

Stop Smoking services dealing with South Asians could learn from New Leaf, a project that works with hard to reach groups in Nottingham to quit smoking and which consults with community and local leaders to find ways to work better with the community. What is unique about this program is that the clients have the right to decide who they want to see and when, instead of the other way around.

According to Carroll *et al.* (1993) and Stewart *et al.* (1996), smoking helps people cope with stress. This was similar to the findings with the older migrants. According to the General Household Survey (Jarvis, 1994 & Jarvis *et al.*, 2003), stress and smoking can also be linked with being a single parent, corresponding to rising divorce rates.

Health promotion needs to be tailored to the needs of the community. Some of the methods to increase awareness are:

- Literature needs to be multilingual and in culturally appropriate style
- Ethnic differences need to be incorporated into smoking interventions.
- Increasing the self-esteem of participants, especially among older migrants, would address a root cause (Modood, 1994).

PHYSICAL ACTIVITY

According to the 'Black and Minority Ethnic Groups in England: The second lifestyle survey' (2000), Pakistani and Bangladeshi men are the least physically active. Some of the reasons for not being active were looking after young children (29%); insufficient time (26%); do not want to use mixed-sex facilities (20%); and will not go to places where people show parts of their bodies (19%). These findings correspond with the findings from the study, especially with the older migrants. According to Fentem (1991), being physically inactive is an independent risk factor for CHD. Inactive and unfit people have a higher chance of dying from CHD than

those who are even moderately active. Both the older and newer migrants were inactive and did no form of physical activity on a regular basis. These findings were also supported by the Second Health and Lifestyle Survey (Johnson *et al.*, 2000).

The Health Education Authority (HEA, 2000) asked adults: 'What serious illness or health problems are linked to not taking enough exercise?' The most commonly mentioned problems were 'being overweight' (41% overall, with little ethnic difference), 'heart disease' (32% of Indian and Pakistanis) and 'diabetes' and 'stroke' (6% overall, with little ethnic variation). The most worrying issue was that around 20% of Indian males, 26% of Pakistani males and 29% of Bangladeshi males did not know of any health problems related to lack of activity. Findings from this study showed contrasting results whereby all the participants had awareness of the lack of physical activity and its detrimental effect on CHD.

Some of the reasons for not participating in recreational activities were insufficient time (26%); would not go to mixed sex venues or where people show parts of their body (20%); and nearly 17% were fearful of going alone. Another factor found in this study was that for older people, being physically inactive was culturally accepted and considered to be the norm in South Asians, whereas newer migrants were willing to make changes in their health behaviour by joining a gym or even going for walks.

Low physical activity and high job responsibility increases the risk of myocardial infarction. According to Ford *et al.* (1998), depression is linked to CHD and also leads to high-risk behaviours like smoking, poor diet and weight gain. Interpersonal conflict, poverty, poor housing, unemployment, fear and safety can cause suffering or distress. Obesity in childhood is a reflection of childhood social circumstances (Parsons *et al.*, 1999). According to Hayes *et al.* (2002), very little is known as to why South Asians are so inactive, and there is little evidence to support the implementation of interventions to promote physical activity among their communities. The perception that South Asians associate large body size with being healthy (Bush *et al.*, 2001) was an issue re-emphasized by study participants, indicating the need for education on the risks for CHD.

Studies by Nazroo (1997) and Bhopal *et al.* (2002) highlighted that there is a link between socio-economic status and being physically inactive, and that a socioeconomic gradient exists, with Bangladeshis having the lowest incomes and

social status in the UK. Professional Bangladeshis were more likely to be physically active, followed by Pakistanis, with Indians enjoying a socioeconomic status almost equivalent to the general population. Both the old and new migrants reported a lack of time for physical activity. The older participants felt that they needed time to spend with family, whereas newer immigrants spent a lot of time working. Both newer and older participants highlighted that time was a major issue.

For older migrants, one reason for not being active was the perception of racism. Some of the Sikh participants felt that they could not swim because of the lack of facilities. Cost also proved to be a crucial factor, as most of the older migrants might have been willing to attend gyms if they were cheaper. Some of the older participants also felt that they did not have transport facilities and needed to be chauffeured around. South Asians are hugely influenced by the film industry (Bollywood). Past actors/actresses were much chubbier than the present generation. For the older migrants, being skinny is a sign of poverty. These findings were also supported by Bhugra (2005), who highlighted changes in people's perceptions according to trends in the film industry.

Knowledge about risk factors for CHD was not sufficient to instigate healthy lifestyle behaviours. The perception of being at risk and mere knowledge of risks is unlikely to motivate people to adopt healthy behaviours (Van der Pligt, 1998). The older migrants believed that they were inactive because most of them could afford a car, and they now travel everywhere by car, whereas previously they could walk over 5-6 miles without any problems.

Older migrants also believed that in the past they did much more work physically, and redundancies have made them change their attitudes. They were also concerned with the lack of facilities and were not comfortable with the type of clothes worn, and wanted to wear more traditional dress when exercising. They also wanted male-only gyms (presumably South Asian females would correspondingly want female-only facilities).

Older migrants were willing to join walking clubs as long as they were not forced, and the instructor was of the same sex and age group. They were not happy to attend any dance classes, as they were not happy with modern dance music. To encourage wider participation, health promotion programmes need to be sensitive to the

community and cater for the diversity in the South Asian population. The older migrants were also happy to attend swimming classes, but wanted male-only sessions as they were shy to walk around in their swimming trunks.

Participants were happy to take part in any physical activity as long as they could wear their traditional dresses and do exercise with *desi* music. They would also prefer an older South Asian male instructor. These findings were supported by Farooqi *et al.* (2000). More South Asians need to be encouraged to take up training as instructors in swimming, exercise and fitness programs.

LAY BELIEFS

The older migrants had lay beliefs and were finding it harder to make changes to their lifestyles compared to the younger migrants. They believed that there is a specific kind of person based on their observations on:

- a. Appearance (overweight & unfit).
- b. People with family history with CHD/ family weakness (Hunt *et al.*, 2001).
- c. Those in stressful and sedentary jobs.

Numerous trends that emerged from discussion with the participants included:

- Older migrants had relatives or friends ('Uncle Norman' types) who enjoyed considerable longevity despite smoking, drinking and doing less physical activity (Davison *et al.*, 1991), and in some cases 'The last person you would expect to have a coronary', who despite being health conscious still gets CHD.
- Older migrants also talked about fate, destiny and luck, and were unsure of the risk of CHD; they felt that it was unpredictable, like 'Russian roulette'
- Older migrants did have significant knowledge to make changes to their lifestyle; they did not feel it appropriate to do so .
- Some of the older migrants made limited modifications to lifestyle once they found out that it affected their quality of life .

- An older migrant delaying seeking medical care was associated with increased mortality and morbidity (Brink *et al.*, 2002; Clark, 2001; Gassner *et al.*, 2002; Richards *et al.*, 2002).
- Older migrants did not have correct interpretations of symptoms and were strongly influenced by their own perceived risks of CHD, like the perception that CHD was related to dramatic events (Brink *et al.*, 2002 & Gassner *et al.*, 2002).
- Some of the older migrants wanted to ‘tough it out’ and avoid seeking medical care for reasons such as phobia of hospitals.
- Some of the older migrants were likely to confuse their symptoms with other conditions, especially those from lower socioeconomic backgrounds.
- Some of the older migrants were worried about ‘bothering the doctor unnecessarily if their symptoms were not found to be cardiac in nature.

Social Marketing Model

In Chapter Six, I used the HBM model with both the older and newer migrants in the study to see if health beliefs will have an effect on their health behaviour with the right and effective message. Results from the study clearly highlighted that the newer migrants were willing to make the health behaviour changes once informed, in comparison to the older migrants who were reluctant to make any changes. To target the older migrants, the best method would be the social marketing method. The aim of social marketing is to change behaviour within a target group. Social marketing is a useful tool in health promotion when an audience is ready for change but is not yet ready to adopt the behaviour.

Example Sikh group	Micro level (individual change)	Group level Group (Organization)	Macro level (society)
Short-term change	Behaviour Change	Administrative changes	Policy change
Example	Attending HP Campaign	Not cooking unhealthy food for <i>langar</i> in the Gurudwara	Adding more tax on Ghee and other unhealthy products
Long-term change	Lifestyle change	Organizational change	Socio-cultural evolution
Example	Starting to eat healthy options	Providing more fitness options for the participants, like male/female instructors, and swimming options	Reduction in obesity-related diseases

Table 7.5 Type of social change by time and level of society (MacFadyen *et al.*, 2001 & 2003)

What distinguishes social marketing from traditional approaches is the consumer aspect at all levels from planning, development, implementation and evaluation stages (Smith, 2000). Social marketing has been successful in improving the lives and health status of communities and individuals. According to Donaldson (2008), social marketing is widely used in the USA in the prevention of HIV/AIDS and other STIs.

According to the theory of social marketing (Kotler & Zaltman, 1971), the ‘four P’s’ of marketing (product, price, place and promotion) are essential.

The Product

In social marketing the product could mean an idea, a social cause or behavioural change (Weinreich, 2006; Lefebvre & Flora, 1998), for example eating more vegetables or exercising more, and they usually come with secondary products like a free gym trainer or even gym tickets .

According to Weinreich (2006), the targeted audience (e.g. *Sikh Jat*) needs to realize that they have real problems and that the product that is offered is the right solution for the problem.

The Price

According to Lefebvre and Flora (1988), the cost in social marketing is a barrier to the consumer. One of the biggest challenges is to reduce these barriers and make the results of certain behaviour override the barriers. For example, people can exchange time, physical effort and lifestyle for a healthier life. The theory of exchange in social marketing means that the participant adopt, reject or maintain a new behaviour, and in return receive benefits that they believe outweigh the cost of the behaviour .

The Place

According to Weinreich (2006), in social marketing, the channel through which the participants are reached with information or training is 'the place'. This could mean GP practices, places of worship or community gatherings. Places need to be easily accessible because they can increase cost and make create barriers to the participants.

The Promotion

According to Weinreich (2006), promotion focuses on creating and sustaining demand for the product. It consists of advertising, public relations, publicity, personal contacts and promotions.

The 'four Ps' in marketing require strategy development. The right product, price and distribution channels should always be developed before considering promotional activities (Stellefson & Eddy, 2008). 'Public' refers to both external and internal groups involved in a programme. 'Partnership' means cooperating with other organizations involved in the programme. Policy change is often needed in order to sustain the change in the long run.

Similarities with Marketing

Marketing and health education both aim to influence the behavioural change, which is voluntary.

Target communication in health campaigns

According to Kreuter & McClure (2004), there is a common belief that by knowing and understanding the cultural implementation of the given target group, public health and health communication programs and services can be customized to meet the needs of the members and cultural characteristics of a certain group might be directly

or indirectly associated with health-related priorities, decisions, behaviours and acceptance, and adoptions of health education and health communication programmes.

According to Slater (1996), audience segmentation is a process of partitioning a large and heterogeneous population into smaller and more homogenous subgroups based on demographic, behavioural, psychosocial, cultural and geographical criteria.

To target the South Asian older migrants we could use audience segmentation so that they are targeted not only based on the language spoken, but on caste.

Challenges

Peattie and Peattie (2009) were concerned about the dangers of the direct effect of business marketing principles, as well as social contexts creating practical problems and confusion regarding the theoretical basics. Grier and Bryant (2005) highlighted the concerns about the usefulness of marketing in public health products in relation to the theory of marketing, analysis and branding. Other sceptics like MacFadyes *et al.* (1999) observed that in social marketing, products are more complex, demand is more varied, and target groups are more difficult to reach. Bloom and Novelli (1981) felt there is all-round difficulty in using social marketing, because of the difficulty in selecting and implementing long-term positioning strategies, difficulties in measuring prices, difficulty utilizing, and control-desired intermediaries and social marketers also often face rejection by consumers to adopt certain behaviours.

HEALTH CARE

In a British general practice study, men diagnosed with depression were three times more likely to develop CHD than control subjects (Hippisley-Cox *et al.*, 1998). However, according to Cornwell and Hull (1998), South Asians are less likely to be diagnosed with psychological problems, and therefore are less likely to receive successful drug treatment for these issues.

According to the NHS, access to health services is a high policy priority (Campbell *et al.*, 2001; Maxwell, 1992). Patients should be able to see a health professional within 24 hours, and a GP within 48 hours (DOH, 2002). Despite the elaborate plans set out by the NHS and financial incentives given out to health professionals, people of South

Asian origin still have poorer health than the indigenous white community (Erens, 2001; Murray & Berwick, 2003).

According to Rashid and Jagger (1992), South Asians do not like consultations on the phone and out of hours care, and this could be one of the many reasons why they frequent their GP practices much more than any other groups and still report more difficulty in accessing primary care. Many practices reduced the number of appointments that could be booked in advance in an attempt to meet the 24/48-hour target, which reduced the ability to book ahead and be seen by their preferred doctor on the day of their choice (Salisbury *et al.*, 2007). The newer migrants felt that they needed to lie and use extreme measures to get an appointment with their GP. In contrast, the study of Rubin *et al.* (2006) in six practices in Sunderland found that the participants were not concerned about the waiting time needed, as long as they got to see their own GP. The older migrants felt that language was the main cause of delaying a repeat appointment. This finding was supported by Gilliam *et al.* (1989), who found that people of European descent have a higher chance of getting a follow-up appointment than those of South Asian descent.

Results from the study highlighted that older migrants used health care services extensively. These findings were supported by Soljak *et al.* (2007) and Greenhalgh (1997), who also raised concerns about South Asians being poor, having larger families and living in deprived and poorer neighbourhoods. With little or less education, they needed health service advice much more frequently.

Ali *et al.* (2006) and Campbell *et al.* (2001) highlighted that South Asians use the GP in different ways, and may have totally different outcomes to their consultations, and their assessment of primary health care is lower compared with white patients. Although South Asians are more likely than Europeans to seek medical advice for symptoms suggestive of angina (Chaturvedi *et al.*, 1997), regional studies suggest that South Asians may be less likely to be referred for exercise testing, less likely to receive thrombolysis and have to wait longer to be seen by a cardiologist and angiography. (Lear *et al.*, 1994 & Dhawan & Bray, 1994).

Most of the older participants and newer migrants did not trust their GPs or their health care providers. This was supported by the personal experience of Professor Aly Rashids (second supervisor) in 2009, after he had undergone surgery and were in the

same room with other South Asian men going through cardiac rehabilitation. They strongly advised him not to listen to the cardiac nurse when running on the treadmill, as they felt that she was being discriminatory and was deliberately making South Asian men to run faster and longer durations compared to white patients.

One of the most common reasons for South Asians to consult a GP is chronic or persistent pain (Chaturvedi *et al.*, 1997). Effective communication may be hindered by poor understanding of cultural differences, language barriers, sex, age and class issues between the South Asian community and health care professionals. When patients and doctors do not share any common understanding the illness and wellbeing ratio is upset (Wright, 1983). Poor communication is the most common source of dissatisfaction with medical care. Communication was one of the biggest problems faced by the older participants in the study. However, other studies have also highlighted that factors like beliefs, knowledge, and accessibility to health care and family influence also act as barriers for the South Asians patients. Johnson (2004) highlighted that proper communication is crucial in the delivery of satisfactory health care.

Most South Asians in the study (new and old) lived in inner city deprived areas and attended GP practices which were 'single-handed practices'. GPs may not have the time and resources to advise each patient individually in what lifestyle changes he/she needs to undergo for better health outcomes. This was supported by a study by Hawthorne (1994), who highlighted that time constraints were one of the biggest issues that GPs face when tailoring advice to individuals. Culture plays a large part in the GP patient consultation process (Ali *et al.*, 2006). Older migrants prefer to go to a practice that has a South Asian GP, particularly one who can speak their local language/dialect; so many older GPs retiring and the changes in Government policy (not recruiting non-EU GPs) has exacerbated the issue, as younger migrants-second generation do not have the same language skills as their predecessors. This finding was supported by a study by Wachtler *et al.* (2006), which clearly highlighted that when there is no mutual understanding between GP and patient, or when the consultation fails, culture becomes the focus point. The new migrants were flexible in their choice of GP, and were fluent in English and other South Asian languages (except the Sri Lankans who preferred their own). For individuals from the Sri Lankan community, the worries of getting the right translator were also highlighted,

as there is the difference between Sri Lankan Tamil and Indian Tamil.

Cape (2002) highlighted that to assure quality service and enhanced satisfaction, GPs need to spend more than ten minutes with each patient. Getting an appointment was stressful for both groups of participants in my study. The older migrants felt that language was the main cause of delaying a repeat appointment. This finding was supported by Gilliam *et al.* (1989), who showed that people of European descent have a higher chance of getting a follow-up appointment than those of South Asian descent. Culture is of importance in the GP-patient consultation process (Ali *et al.*, 2006).

Consultations with patients who have limited English may be viewed as ‘difficult cases’ by practitioners, and may lead to negative judgments and stereotyping (Roberts *et al.*, 2005). In another study, language and cultural differences were reported to cause misunderstandings in 20% of consultations (Hussain-Gambles *et al.*, 2004). However, communication failure cannot be attributed solely to language difficulties (Elliott *et al.*, 1999), but rather the context within which communication takes place must be considered. It is difficult to separate issues of communication from wider cultural factors, as all GP consultations are linked with culture. (Wright, 1983).

Cultural awareness should be a central part of medical education and general practice training; there is a need for specific training aimed at GPs who see patients who speak foreign languages. Taylor *et al.*, (1997) observed that translating services need to be more accessible in primary care; Bischoff *et al.*, (2003) stated that GPs should be better trained in the use of interpreters for health outcomes of using family members in the communication process (Free *et al.*, 2003; Phelan & Parkman, 1995).

A small proportion of participants (7%) had concerns with the food served in the hospitals, even though they were said to be strictly *halal* or pure vegetarian and approved by their community leaders. The older participants believed that they got food that was microwaved, whereas the indigenous people got food freshly made on site. That was their concern; food made in other locations could be contaminated. In other words, they did not believe that the services provided were tailored for them. Community leaders have a huge role in providing the right message for the community using the appropriate channels like Sunrise Radio, Star TV and other

local newspapers (Rashid & Jagger, 1992).

Health Campaigns need to be culturally sensitive and multilingual. New migrants feel that there is no provision for their languages (Malayalam and Tamil), despite the fact that Sri Lankans have been living in the UK in significant numbers since 1984. Both groups were well aware of the Department of Health campaigns like Healthy Living and Smoking Kills, however they could not relate the message to them personally.

There is a view that ethnic minority groups are over researched. This was also a concern of the older participants, who felt that there was an unusual rise in research activities within their communities. These findings contradict those of Hussain-Gambles (2004), who clearly highlighted that few trials and cohort studies take place which include South Asians. Even among the leaders there are concerns, and they are reluctant to allow research. I personally felt a lot of hostility when I initially approached them, but after some persuasion they agreed. I promised to send them the results of the study once I complete the PhD.

There is evidence that shows that racism has a huge effect on access to health care, which in turn affects CHD. Most of the older and newer migrants felt that they were being discriminated against, because their GP never listened to their needs, for example by having any extra tests done, or being referred to a consultant. The perception of participants (especially the newer migrants) of discrimination and racism within the health care system may not be discrimination or racism, but a misunderstanding of words, as newer migrants are used to the health care system in the Subcontinent, where as long as you pay, you can see a consultant for even the simplest of advice. This finding was supported by a study by Mead and Roland (2009) that highlighted that ethnic minorities have poorer evaluation of health care than the indigenous groups because of the different expectations of care and communication issues. As early as 1989 it was reported that native British patients were more likely to leave their GP surgery with a follow-up appointment (Gillam *et al.*, 1989). Follow-up studies of such patterns are now a matter of urgency. There is evidence that shows that racism has a huge effect on access to health care, which in turn affects CHD. Most of the older and newer migrants felt that they were discriminated against, because their GP never listened to their needs, for example by having any extra tests done, or being referred to a consultant.

Knowledge about risk factors was not enough for the participants, especially the older migrants, to instigate lifestyle changes; lay beliefs, perception of being at risk and mere knowledge of risk factors is unlikely to motivate people to adopt healthier behaviours (Van der Pligtt, 1988)

CONCLUSION

This study for the first time has demonstrated that psychosocial factors directly or indirectly had a significant impact on CHD in the migrant South Asian men who participated in this study. By demonstrating commonalities and uniqueness, this study has clearly provided a pathway for future research in areas that were underestimated, especially regarding stress.

Findings strongly indicate the need for tailored health promotion programs that are culturally sensitive. Using health behaviour models of interventions, tailored specially for South Asians, could help to prevent the risk of CHD recurring in those who are already affected.

What the participants in this study provided was unique, because they shared their experiences, which were influenced by religion and cultural beliefs. Health professionals could use information from this study when devising guidelines for future health care which is culturally sensitive.

Health education/awareness raising sessions are needed for these communities, promoting the benefits of smoking cessation, healthy cooking and physical activity. These sessions should attempt to influence the major modifiable risk factors affecting those at risk of developing or those who are already suffering from CHD and diabetes.

The Asian communities as a whole are lacking in accurate information regarding the ability to prevent or control these diseases, and due to poor literacy rates (especially with the older participants), the simple provision of written literature would be largely infective. The choice of Asian media (radio and TV) could be the option.

Health education sessions around healthy eating and lifestyle, run by bilingual workers of the same gender as the participants, are to be encouraged. In addition to giving health information, participants would be enabled to improve their English language skills in the secure environment of the group, through discussion and role

playing.

The availability of culturally appropriate, single-sex, local, community-based infrastructures would remove many of the barriers people from the South Asian communities face when considering accessing physical activity sessions. It would also give prospective participants the confidence to participate in what may be an unfamiliar activity without fear of embarrassment or awkwardness.

Participants in the study highlighted stress as the major cause of heart disease. This issue needs to be addressed by providing emotional support and providing access to social, personal and life skills which would result in an increase in self-efficacy and self-empowerment. Just providing awareness and knowledge is of little value if individuals do not have the self-confidence or skills to put this information into practice.

Encouraging wider participation in English language classes would be useful in numerous respects. True empowerment of individuals or control over one's health cannot occur unless people have the power to communicate directly and effectively with those educating or caring for them.

An awareness-raising campaign targeting the Asian community needs to be developed, and smoking cessation services need to be promoted and delivered in a culturally acceptable manner. Prospective bilingual smoking cessation counsellors need to be identified and supported through training.

Interpreting services need to be extended to include primary care, and their existence should be promoted amongst GPs when making referrals.

Citywide, accessible, culturally appropriate, community-based, long-term rehabilitation services providing moderate and appropriate physical activity should be provided to people recovering from cardiac episodes after formal discharge from hospital. The service should be delivered by workers with appropriate language skills where possible, or with language support where required. All staff should receive training in religious and cultural sensitivity. Services should include provision for those people suffering from diabetes. These services should be provided out of regular house and at weekends to ensure accessibility.

Accessible, community-based facilities should be developed to provide diabetic education sessions in the mother tongue of those at risk of developing diabetes. The facilities should provide peripheral services for those suffering from diabetes, such as chiropody and dietetics. Services should be provided by the relevant health professionals, and facilities should be staffed by community members with appropriate language skills. The aim is to provide a comfortable and accessible environment to encourage service uptake in an environment with established language support, for patients not attending appointments.

A specialized standardized training programme for ethnic minority community workers should be established and supported, to develop the capacity of the South Asian communities and enable them to address their own health education needs.

Social marketing should be used to deliver health promotion to a wider audience.

In any future policymaking, involvement by and consultation with South Asian communities should be ensured from the outset, to ensure the inclusion of the communities' views at the strategic planning stage of any service.

Chapter Eight

CONCLUSION

INTRODUCTION

The increased risks of CHD in migrant South Asians are well documented. However, very little is known about the influence of South Asian culture on CHD. This study was designed in order to determine whether competent health care for migrant South Asians exists, and to explore the role of culture in influencing migrant South Asian knowledge, health beliefs and behaviour and experiences of CHD. A phenomenological approach guided this qualitative study, in which eighty-three South Asians in the UK volunteered to participate. This chapter will summarize major findings from the literature, and the methodological approach used to conduct this study and its study. The chapter then goes on into highlighting the significant cultural issues that have emerged following an analysis of study findings, and presents their implications for education and service provision. The chapter also discusses the limitations of this study. The chapter concludes by providing practical recommendations for future research.

REFLECTIONS FROM THE LITERATURE

Migrants' culture has a central influence on health beliefs and health-seeking behavior, which is also shaped by their experiences of the country to which they migrate. Culturally competent health care systems minimize health disparities and are an essential requirement for CHD risk mitigation, management and improved health outcomes. This is significant in the UK context due to the burden of CHD in the UK, and the multicultural nature of British society (with large urban populations of South Asian origin). A number of subcultures exist within the South Asian population (such as Punjabi *Jat*, Gujarati *Lohana*), although many common threads exist among subcultures. The basic principles of the South Asian culture with regard to attitudes about health are destiny and fate, and the primary importance of family, even in

addressing health care needs.

Lifestyle modification plays a major role in the prevention and management of CHD amongst South Asians, with lifestyle factors and health behaviors being influenced by health beliefs. Health beliefs of migrant South Asians are in turn shaped by the South Asian culture, and to a certain degree by the process of integration. In general, the everyday South Asian diet is rich in saturated fats, sugar and salt. Addition studies report a sedentary lifestyle and a lack of physical activity among most South Asians.

A number of psychosocial models of health behavior are used in the context of CHD, although no studies have reported the effectiveness of these theoretical intervention models in South Asians. Very few qualitative studies have reported on CHD experiences, risk factor knowledge, health beliefs and behaviors in relation to CHD among migrant South Asians, especially in the UK.

REFLECTIONS OF MIGRANT SOUTH ASIAN EXPERIENCES HAVING CHD KNOWLEDGE, INCLUDING HEALTH BELIEFS AND HEALTH BEHAVIOURS

Eighty-three men took part in the study. The majority had no formal education except the new migrants and three other younger participants. The participants in the study linked CHD with psychosocial factors in all aspects of their lives, from eating to exercising, and even seeing their GP. All of the participants have a fairly good knowledge of the risk factors which were connected with CHD, but very few were practicing what they have learnt.

CHD AND SOUTH ASIAN CULTURE

Marmot *et al.* (1984: 51) highlighted:

This high rate of diabetes could contribute to the high rate of ischemic heart disease in Indians. This explanation would then pose the problem of why immigrants from the Caribbean, with their high rate of diabetes do not also have a high rate of ischemic heart disease.

The observation from Marmot *et al.* (1994) clearly indicates that new avenues still need to be explored. While there are many policies and strategies in the health

service, they have all struggled with the challenge of equitable health care in multi-ethnic societies. Since ethnic inequalities in health are far more complex than socio-economic inequalities, there is the importance of the wider determinants of health such as wealth, housing, employment and education for ethnic minority groups.

South Asian culture was held responsible for an array of health beliefs and behaviors by participants in relation to CHD including:

- Most South Asian men in the study believed that occurrence of CHD was inevitable.
- Most South Asian men blamed their culture for their unhealthy lifestyle.
- South Asian culture provides the strength to cope with CHD
- Some of the participants (Gujarati-Hindu) believed that eating meat (not being vegetarian) and not believing in *dharma* and *karma* could be contributory factors for CHD.
- Being slim was associated with ill health
- CHD and any other illnesses were considered as a family matter, something not to be discussed outside the family.
- South Asians considered themselves to be spiritual; they perceived it was unnecessary for them to listen to medical advice.
- Being resistant to change, and cultural barriers to exercise and dietary modifications, prevented participants from adopting healthy behaviors before and after CHD.

IMPLICATIONS FOR CLINICAL PRACTICE

The challenging problem of CHD in South Asians needs to be met with a cohesive multilevel strategy and tackled at the primary, secondary and tertiary levels. Behavioral models of intervention tailored to the sensitivities of South Asian culture need to be implemented to ensure efficient prevention, management and rehabilitation of CHD in this high-risk population. Interventions that are family focused and those, which develop amicable partnerships with local South Asian communities, are

important to generate culturally appropriate, sustainable and effective strategies for CHD prevention and management.

There is a shortage of high quality evidence to provide guidance as to how to increase physical activity in South Asians living in Britain. The recommended amount of physical activity needed to reduce the risk of premature death from CVD and type 2 diabetes and to provide other health benefits is a minimum of 30 minutes a day for adults and 60 minutes for children of at least moderate intensity physical activity on five or more days of the week. There is a need to systematically review the existing evidence to identify the current evidence base and the gaps to be addressed by future research.

Recommendations for leisure services (e.g. swimming pools, gyms and leisure centers):

- Separate male and female only sessions
- More ethnic minorities employed at leisure services
- Fitness instructors of South Asian origin
- Family-focused activities
- Increasing leadership in the community, such as training people to become walk leaders and fitness instructors. South Asian role models in promoting physical activity in the local community; case workers to organize events; use of the buddy system to support people to walk in the local areas or countryside.
- Better marketing and communication of services available to the local community, their cultural appropriateness, their benefits, how to get involved and how to access them by different modes of transport.
- More information on how to access green spaces and what kind of activities are available which are culturally appropriate.
- Provide safe and pleasant environments to encourage walking.
- Using spaces that are presently available more efficiently.

CHD prevention approaches should begin at a much earlier age in South Asians due to the high risk and associated high mortality and morbidity. Individual behavior counseling interventions for CHD that are available in health care settings are often described to have only modest impact on behavior change. Only 5 to 15% of individuals who receive an intervention at the clinical setting make significant behavioral changes, such as quitting smoking (Jolliffe *et al.*, 2000; Domanski, 2006). However, these minor behavior changes and decreased risk factor profile translate to major benefits at the population level when systematically applied to a large proportion of high risk-population groups (Prochaska, 1997), such as South Asians in relation to CHD

- Appropriate, high quality and accessible health care should be available to all people from every ethnic minority group.
- Advocacy and action against racism; to take action against racism in any form, and to reduce racist attacks, harassment and discrimination.
- Information should come from workers who originate from the ethnic communities, so that decisions are made from within the community.
- More translators and choice of food in hospitals. Even though *halal* options are available, this needs to be spelled out more clearly in menus.
- General practitioners and clinicians should recommend regular screening for lipid levels and identify any signs of dyslipidaemia among South Asians. However, the threshold for intervention and treatment targets needs to be lower for South Asians in comparison to other groups, as the risks of CHD in Indians is at least twofold higher than other population groups.
- Use of complementary or alternative therapies (*hakims* and Ayurvedic remedies).
- Training NHS staff to raise awareness of racism, ethnicity and health, and to enable staff to provide appropriate and accessible services.
- Patient profiling; monitoring ethnicity to obtain and use information about the ethnicity and health of people from minority ethnic groups..

- Involving more participation of South Asians in large-scale and expensive research.
- Working with community leaders to highlight the importance of research and how voluntary participation helps the community.

These community-based workshops should emphasize alternative healthy cooking methods that incorporate low fat, sugar and salt in the traditional South Asian diet. The emphasis should be on increasing daily vegetable and fruit consumption and promoting a high-fibre diet rich in protein, essential vitamins and folic acid. At regular intervals health professionals need to identify health needs of Indians in order to make referrals to mainstream agencies, health resources and services, yoga instructors, dieticians (who are familiar with Indian diet and cooking habits) and local Indian community organizations.

Health care professionals need to be sensitive to the feelings of racism among South Asians, although racism may not exist to the degree perceived. By being aware of the cultural sensitivities and major beliefs and practices of Indians, health professionals can make a difference to care provided and alleviate health disparities in the context of CHD. This could include culturally tailored discharge and rehabilitation advice for Indians after an acute episode of CHD. In addition routine use of questionnaires to determine the patient's perceptions of CHD are useful in determining cultural sensitivities and variations.

- Promote the goodness of eating five portions of fruit and vegetables a day.
- Recommend low intake of folic acid that will account for high amounts of homocysteine.
- Decrease the intakes of saturated fatty acids and to encourage an increased intake of fruit and vegetables and oils rich in linoleic acid.
- Decrease the glycaemic index to balance insulin resistance.
- Increase awareness, especially among Hindus, as their diet tends to be lacking in Vitamin B12 along with homocysteine.
- Better understanding of food labels, especially the amount of sugar, saturated

fat and calories to have a balanced diet.

According to the 'Black and Minority Ethnic Groups in England Second Lifestyle Survey (2000)', South Asians' knowledge of the health risks of smoking is poor. Only 25% of South Asians perceive there to be a link between cigarette smoking and heart disease (Johnson *et al.*, 2000). Therefore, there is a need to:

- Increase awareness of the addictiveness of cigarettes.
- Increase awareness of NRT (nicotine replacement products) and their effectiveness.
- Increase use of South Asian media to promote services.
- With the help of Asian Quit Line, train community workers to promote health promotion within the community.
- Increase anti-smoking campaigns during the month of Ramadan.
- Since smoking is socially acceptable within the Pakistani and Bangladeshi groups, culturally appropriate advice in different languages needs to be targeted.

LIMITATIONS OF THE STUDY

The major limitation of this study was the fact that the participants were of mixed educational backgrounds. Therefore, the data may not reflect the true picture of the South Asian population in the UK. I had 83 participants in 13 different groups. Most of the other studies used men and women, whereas my sample had only men. I started my PhD study trying to find the variations between groups and subgroups, to see if caste/religion makes a difference, but later on I realized that most South Asians have identical views once they migrate. What I hope is that the methodological approach, including data collection and data analysis procedures, and verbatim quotes could assist other researchers to make decisions regarding the integrity, similarity and transferability of the findings.

RECOMMENDATIONS FOR FUTURE RESEARCH

Exploring a number of behavioral aspects of migrant South Asians in relation to CHD and changes in behavior due to acculturation will provide deeper insights into the reasons why migrant South Asians demonstrate particular lifestyle health behaviors. Other issues in relation to psychosocial factors and the importance of children that emerged from the study will benefit future research

SOME FINAL THOUGHTS AND CONCLUDING COMMENTS

This study offers insights into the fundamental aspects of South Asian culture that influence a number of aspects related to CHD. These findings offer avenues for health strategists to formulate and implement tailored health promotion and prevention programs that cater to the sensitivity of the traditional South Asian culture. Internationally, very little qualitative research has focused on the CHD experiences of migrant South Asians and the paths undertaken by patients with CHD and their family members.
